NEW EQUIPMENT DIGEST

A Penton Publication

February, 1958

Volume 23—Number 2

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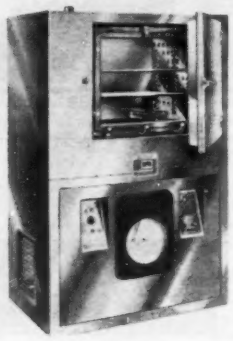
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

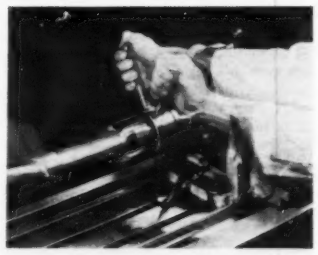
HUMIDITY CABINETS
have 20-98 per cent moisture range



Dry bulb temperatures from 32 to 185° F and controlled relative humidity from 20 to 98 per cent are available in Counter-Flow humidity cabinets. Made of polished stainless steel, inside and out, and with a full inner glass door, they mechanically convect air horizontally across the test chamber. The dew point temperature is controlled through directional flow solenoid valve and the Constant-Flow principle permits rapid control cycle. The conditioning cabinet is isolated from the test chamber. Cabinets have a built-in two-point programming unit, 24-hour timer, and wet and dry bulb recorder. Standard sizes are 5.8 and 27 cu ft. Stainless steel shelves are included. Made by **Blue M Electric Co.**, 138th & Chatham St., Blue Island, Ill.

▲ For more details circle **NED-1 B8** on enclosed inquiry slip ▲

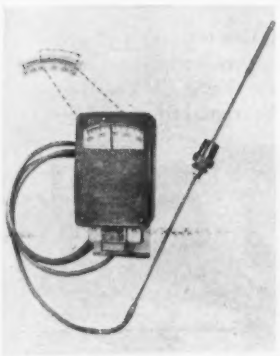
INDEXING TOOL
simplifies manual indexing



Manual indexing for straight or spiral machining operations is simplified by the Trig-R-Dex indexing tool. To index, handle trigger button is pushed down, handle is moved until pin engages next hole, then pulled to stop position. Both right and left-hand operations having from 1 to 10 spaces can be accurately indexed. Available indexing plates with exact spacing required are easily changed. Made by **Detroit Reamer & Tool Co.**, Dept. 105, 780 W. Maple Rd., Birmingham, Mich.

▲ For more details circle **NED-2 B8** on enclosed inquiry slip ▲

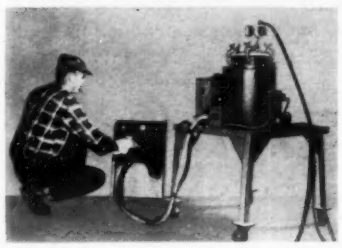
TEMPERATURE TRANSMITTER
indicates in 100-600° F ranges



Pneumatic transmission of temperature in ranges from 100 to 600° F, with spans of 100 and 200° F, is function of the Model 44 indicating temperature transmitter. The upper or more sensitive portion of the conventional vapor pressure thermal curve has widening divisions over a 4½-in. scale to provide high sensitivity. Indication is by red pointer and black-on-white scale markings which can be read up to 20 ft away. The Class II thermal system requires no ambient temperature compensation. Liquid or gas filled systems are available for temperatures above 600° F and below 100° F. Unit can be wall, surface, or vertical pipe-mounted. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

▲ For more details circle **NED-3 B8** on enclosed inquiry slip ▲

ASPHALT COMPOUND SPRAYER
equipment includes tank, hose, guns



Electrically heated pressure tanks, heated hoses, and heated hand-held spray guns comprise this system for spraying hot asphalt base compounds. Material is applied in varying thicknesses to metal, concrete, wood, fiberboard, and other materials for surface protection. Controlled heat maintains the material at a usable temperature, even during intermittent operation. Photo shows Model 5PV unit with 5-gal low pressure tank, Teflon-lined hose, and gun with mechanical break-up nozzle. Made by **Sta-Warm Electric Co.**, 130 N. Chestnut St., Ravenna, Ohio.

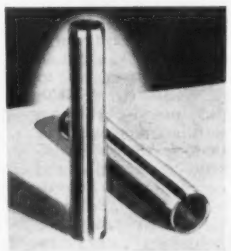
▲ For more details circle **NED-4 B8** on enclosed inquiry slip ▲

CERAMIC TUBING
1/8 to 3/4 in. diameters

Tubing made from Pyroceram, a crystalline glass-ceramic material (*NED, July* '57), is available in diameters from 1/8 to 3/4 in. for many industrial applications, including heat exchangers and process piping. Larger diameters will be available. It is pure white and opaque, with thermal shock resistance equivalent to that of fused silica. Flexural strength of abraded Pyroceram Code 9608 tubing is 17,000 to 23,000 psi. Used in heat exchangers, the tubing affords high rates of heat flow per unit area, high operating pressures, minimum abrasion damage. Hardness by Vickers diamond pyramid test is 550. Coefficient of expansion is 5 to 11 x 10^{-7} cm/cm/degree Centigrade. It is gas-tight and has zero water absorption. Made by **Corning Glass Works**, Dept. 21, Box 544, Corning, N. Y.

▲ For more details circle **NED-5 B8** on enclosed inquiry slip ▲

SPRING PIN FASTENERS
made of beryllium copper

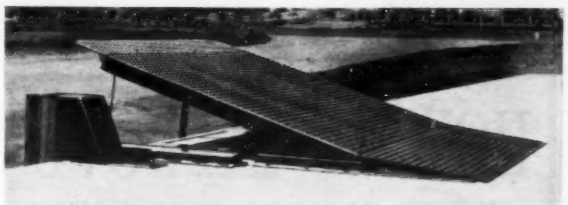


Use of beryllium copper in Sel-Lok spring pin fasteners combines this vibrationproof method of fastening with the nonsparking, nonmagnetic, and high conductivity features of the alloy. The axially slotted tubular pin locks by spring action when driven into an ordinary hole. Driving is by hammer or press, with chamfered ends simplifying starting. Beryllium copper pins are made in diameters from 0.062 to 0.250 in., lengths from 3/16 to 4 in., and length tolerances from ±0.015 to 0.030 in. Hardness is 36-42 Rockwell C and minimum shear strength is about 60 per cent of standard carbon steel spring pins. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

▲ For more details circle **NED-6 B8** on enclosed inquiry slip ▲

AUTOMATIC DOCKBOARD
installs on top of existing docks

Simply bolted to the top of an existing dock, Model 1200 Hi-Lo automatic dockboard is made in 8 and 10-ft lengths with roll-over capacity of 12,000 lb.



A counterweighting system is mounted on face of dock between two Kelco bumpers. Backing truck automatically lowers the ramp to working position. After loading is completed, ramp returns to original position, ready to service the next carrier. Entire adjustable ramp section tilts to compensate for uneven truck beds. Made by **Kelley Co.**, 2110 W. Mill Rd., Milwaukee 9, Wis.

▲ For more details circle **NED-7 B8** on enclosed inquiry slip ▲

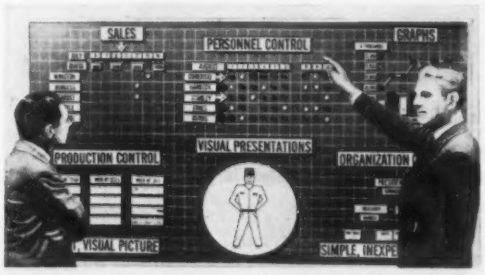
MACHINE SET-UP KIT
has nuts, clamps, studs, other parts

All necessary set-up items are kept handy at the individual machine tool in the Jergens Tee Set Kit, designed to hang on a wall or be set on a table. Contents include 4 extension nut couplers; 4 flange nuts; 4 T-slot nuts; 4 strap clamps; 24 studs with 3/8, 1/2, 3/4, and 5/8-in. diameters; and 4 T-slot nut sizes for each stud diameter. Strap clamps are soft, and T-slot nuts are heat treated to 200,000 psi. Metal is protected by a black penetrate finish. Made by **Jergens Tool Specialty Co.**, Dept. NED, 712 E. 163rd St., Cleveland 10, Ohio.

▲ For more details circle **NED-8 B8** on enclosed inquiry slip ▲

VISUAL CONTROL BOARD
for office and production uses

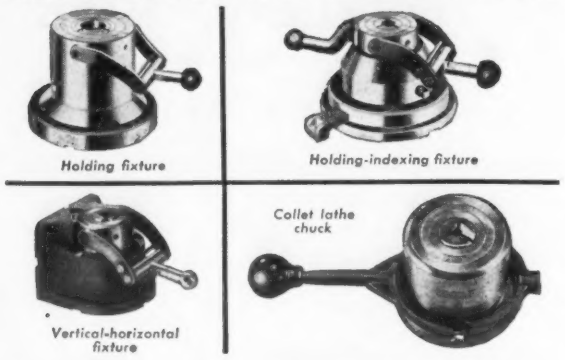
Visual control of office and production schedules, sales records, management, service schedules, inventory, warehousing, and traffic are typical applications



for the Magne-trol visual control board. It is made of magnetic steel bonded to Masonite and measures 24 x 36 in. Alnico magnets of various colors and sizes; magnetic cardholders; supporting units for pictures; tape for maps, charts, and graphs; graph papers; plastic bars; identification stickers; and magnetic arrows are available for use with the board. Made by **Methods Research Corp.**, 442 Mosel Ave., Staten Island 4, N. Y.

▲ For more details circle **NED-9 B8** on enclosed inquiry slip ▲

GET A HOLD ON YOUR WORK



USE Zagar COLLET FIXTURES-

the most effective, economical, efficient devices for accurate production

A range of fixtures, ideal for milling, drilling, tapping, and grinding is offered by Zagar. Small parts production can now be handled economically, accurately, and profitably. All fixtures can be had in 1" and 2" capacities.

Get Manual "N-2" for more data.

ZAGAR, INCORPORATED 23880 Lakeland Blvd., Cleveland 23, Ohio

Zagar TOOLS FOR INDUSTRY and SPECIAL MACHINERY

For more details circle NED-10 B8 on enclosed inquiry slip

A Shortcut to Profit

With the highly competitive conditions that exist today in practically all fields, manufacturing executives are seeking every possible means for curtailing production costs. They are taking advantage of the economies offered by the hundreds of new machines, components, materials, and methods announced in the editorial columns of NEW EQUIPMENT DIGEST each month. These digest descriptions are being studied more closely than ever, because the products frequently open the way for reduced cost in the finished goods. This lower cost is the simplest way to maintain a profitable operating level for the company.

Inquiries produced by NEW EQUIPMENT DIGEST are setting new records. During 1957, inquiries were up 19 per cent over 1956, our previous all-time record year. This is positive evidence that men in industry are looking for ways to cut costs, increase production, and turn out better products at a profit. We will continue to bring you news of what's new for industry each month to aid you in your plant operation, maintenance, production, and engineering.

A. N. Gregg
EDITOR

For more details circle NED-14 B8 on enclosed inquiry slip

HOW TO IMPROVE
YOUR PLANT'S CLEANING AND DEGREASING EFFICIENCY

Join the 4,500 firms which specify

FINE ORGANICS Safe-Tee® Solvents

Faster, Safer, Economized Cleaning & Degreasing Agents

For Electric Motors, Power Generators, Condensers, Starters, Contact Points, Mechanical and Metal Parts, Bearings, Finely Finished Surfaces, Etc.

All These Advantages!

Fewer man hours . . . reduced maintenance costs.

Equipment down-time at minimum . . . no motor failures due to inefficient cleaning and degreasing.

Low toxicity . . . better health.

High flash point . . . minimizes fire risk.

Harmless to all surfaces, including electrical insulations.

No significant residues after rapid drying. Perfect for prepainting operations and electrical equipment cleaning.

F.O.-128 *Added Features!*

20 times safer than carbon tetrachloride. More effective!

Excellent penetration and cleaning into slots.

Can be used for cleaning motors in vat, or for spraying windings.

Will not produce dermatitis.

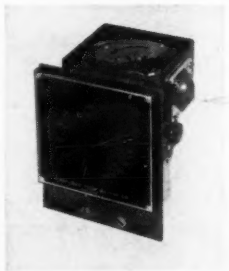
Two Invitations

1. If you have a specific problem, write and tell us about it.
2. Ask for your complimentary copy of "What Do We Mean By Safety Solvents," plus technical characteristics of F. O. Standard SAFE-TEE® SOLVENTS. Address Dept. NE-2

FINE ORGANICS, Inc.
211 E. 19th St., New York 3, N. Y.
Plants: Lodi, N. J., California, Kansas, Texas
Warehouses In Principal Cities

For more details circle NED-11 B8 on enclosed inquiry slip

PNEUMATIC RATIO RELAYS
controls output-input proportion between two pneumatic signals



Null-balance-vector principle is incorporated for accuracy in Type VRR ratio and Type VMR multiplying relays. Former is used to control a proportional relationship between two pneumatic signals when that relationship must be changed periodically, as with adjustment of fuel to air ratio. Latter is used where relationship must be changed only infrequently, or to step signal pressures up or down between two related systems which do not use the same signal pressure ranges.

Standard VRR ratio range is 0 to 2:1 with linearity of ±0.5 per cent. They have 3 to 15 psi input and output ranges and require 18 to 20 psi air supply. Type VMR relays have 0 to 3:1 ratios with linearity of ±0.5 per cent. Pressure ratings are 40 psi input, 33 psi output. Air supply of 18 to 35 psi is required. Made by **Republic Flow Meters Co.,** 2242 Diversey Parkway, Chicago 47, Ill.

For more details circle NED-12 B8 on enclosed inquiry slip

LOCKOUT AND BE SURE!

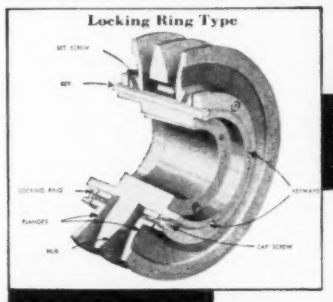
SAFETY MULTIPLE LOCKOUT

For locking out electric switches and fuse boxes where a number of men are working on the same line. Accommodates up to six padlocks. Switch may not be thrown until last man removes his lock. Sturdily constructed yet light and easy to handle. Length overall 8¼". Provides a sound procedure for an everyday problem.

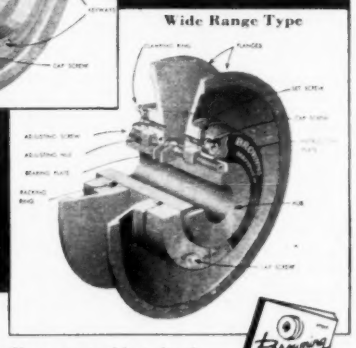
WRITE FOR BULLETIN NO. 95

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. Fourth Street • Philadelphia 33, Pa.

For more details circle NED-13 B8 on enclosed inquiry slip



NEW . . . Browning VARIABLE PITCH DRIVES



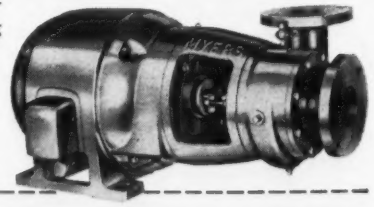
These rugged Browning Sheaves provide a simple, efficient method of speed control for drives up to 30 hp. Wide range and locking ring sheaves use Q, R or W wide range belts. Two groove locking ring sheaves use B or C belts. All locking ring type use same exclusive split taper bushing featured in Browning's entire line of V-drives, chain drives, couplings and paper pulleys. Details in illustrated catalog V-183. Ask your Browning distributor for free copy, or write **Browning Manufacturing Company. Maysville, Kentucky.**

Browning POWER TRANSMISSION EQUIPMENT

For more details circle NED-15 B8 on enclosed inquiry slip

Hydraulically and dynamically balanced impellers mean longer life for MYERS CENTRIFUGALS

The entire Myers Centrifugal line features a closed-type impeller, hydraulically *as well as* dynamically balanced. Result: a minimum thrust on bearings. Wearing rings can easily be replaced to restore pump to its original operating condition.



Myers offers a complete Industrial Pump line including motor-mounted, direct-connected and belt-driven models in sizes from ⅓ to 60 H.P.

Myers® PUMPS

THE F. E. MYERS & BRO. CO.
9502 Orange Street, Ashland, Ohio • Kitchener, Canada

For more details circle NED-16 B8 on enclosed inquiry slip

NEW! DISCOVERY!
SAVES PLUMBING BILLS

★CLEANS INSTANTLY

Chicago—February 1st—Factories, Machine Shops, Offices including Home Owners are constantly having trouble with clogged-up pipes which proves expensive in Costly Plumbing Bills—

But now—using Water Impact and Air Pressure, here is a new unit called the **Plumber's Flushing Gun**, which cleans all lines up to 100 ft. It will open any number of bends in pipe. Yet anyone can operate this new gun, which triggers easily.

TOILETS, URINALS, SINKS, and FLOOR DRAINS clogged with paper, grease, rags, sand, and other debris can be cleared with one or more shots from the gun, **saving the owner, the Gun's price the first time it is used.** This new Flushing Gun may be used on any ½ to 6 inch waste pipe including Sink Drains, Floor Drains, Hot Water Pipes, Drinking Fountains, Septic Tanks, and Urinals. Obstructions melt away INSTANTLY when struck by the hammer like blow of this new unit.

AMAZINGLY EFFECTIVE

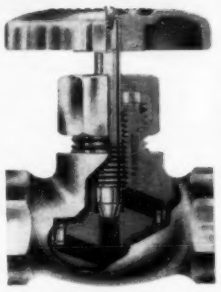
Hose attachment feeds water thru gun while air is released causing chain reaction in pipe cleaning the most stubborn stoppage.

This new Plumber's Flushing Gun is offered on a 30 Day Free Trial to prove its value. **BUT MOST IMPORTANT IS THIS**—What is this Tool worth to your Factory, Building, Machine Shop or in your own Home in **Costly Plumbing Bills Saved.** For your own good—Fill coupon for Free Booklet right now—No agent will call—Obey that urge, mail now or write postcard. (Chicago Phone Kildare 5-1702)

MILLER SEWER EQUIPMENT, INC., 4638 N. Central Ave., Chicago 30, Ill.
Please send FREE BOOKLET on Flushing Gun, I am not obligated.
NAME
FIRM
STREET CITY STATE

▲ For more details circle **NED-17 B8** on enclosed inquiry slip ▲

NEW for applications where space is limited and operating areas are close



- accurately controlled
- perfect shut-off
- high pressure

KEROTEST

N-28 GLOBE TYPE NEEDLE VALVE

Short, compact, precision-machined, this new Type N-28 Valve is designed for services which demand accurate control.

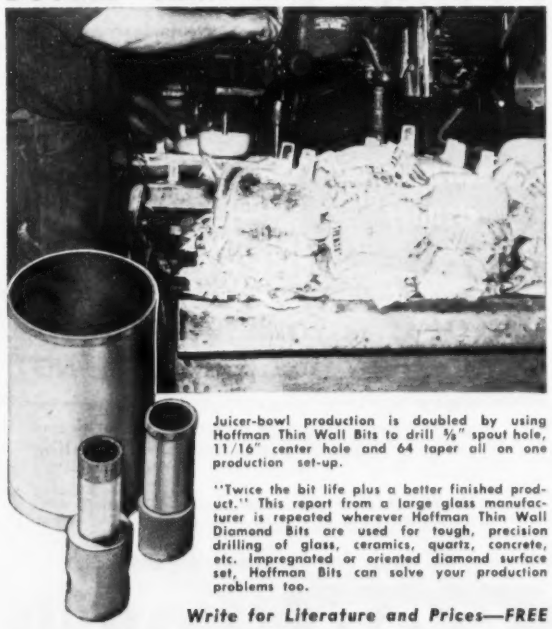
One-piece forged carbon steel body—12/14 chromium heat treated stainless steel stem, Teflon packing—Maximum working pressure 10,000 p.s.i. at 70°F. Available in sizes ⅛", ¼", ⅜" and ½".

Write for the new N-28 Bulletin

KEROTEST MANUFACTURING CO.
2522 LIBERTY AVENUE, PITTSBURGH 22, PA.

▲ For more details circle **NED-18 B8** on enclosed inquiry slip ▲

HOFFMAN DIAMOND BITS DOUBLE "Juicer-Bowl" PRODUCTION



Juicer-bowl production is doubled by using Hoffman Thin Wall Bits to drill ⅝" spout hole, 11/16" center hole and 64 taper all on one production set-up.

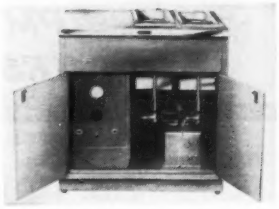
"Twice the bit life plus a better finished product." This report from a large glass manufacturer is repeated wherever Hoffman Thin Wall Diamond Bits are used for tough, precision drilling of glass, ceramics, quartz, concrete, etc. Impregnated or oriented diamond surface set, Hoffman Bits can solve your production problems too.

Write for Literature and Prices—FREE

HOFFMAN BROS. DRILLING CO.
SINCE 1902
106 CEDAR ST., PUNXSUTAWNEY, PENNA.

▲ For more details circle **NED-19 B8** on enclosed inquiry slip ▲

ULTRASONIC CLEANER
equipped with one or two tanks



Labsonic ultrasonic cleaner, housed in a furniture-type cabinet, can be supplied with one tank for cleaning, or two tanks—one for cleaning and one for rinsing. The 16 x 10 x 6½-in. tanks will accommodate most sizes of instruments and apparatus. Tanks include stainless steel work baskets for holding delicate mechanisms, bearing assemblies, knives, electrical assemblies, and various mechanical parts. Cabinet is offered with or without casters and with stainless steel work top. Power generator operates at 35 to 40 kc per second, and the transducers are barium titanate. Average generator output is 250 w. Cabinet is 24 x 35 x 37 in. Made by **Labline, Inc.,** Dept. NE, 3070-82 W. Grand Ave., Chicago 22, Ill.

▲ For more details circle **NED-20 B8** on enclosed inquiry slip ▲

ANCHOR BOLTS
for wood, plaster, or cement walls

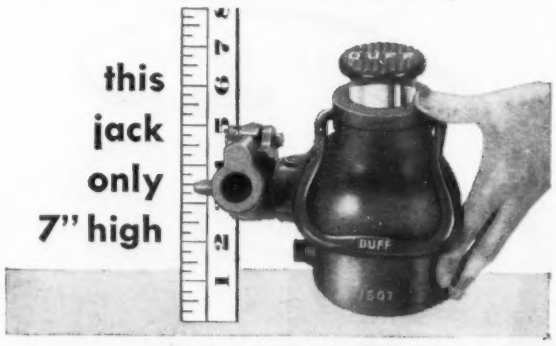
Fastening jobs in wood, plaster, and cement walls, floors, or ceilings are simplified with these anchor bolts, shown in actual size. Made of brass with an expansion sleeve, bolts find wide application in industrial and general construction work. Model shown with ¼-20 steel bolt is available from stock. Other sizes can be ordered. Made by **A. G. Kaddis Screw Products Co.,** 312 Hudson Ave., Rochester 5, N. Y.

▲ For more details circle **NED-21 B8** on enclosed inquiry slip ▲

PANEL REMOTE CONTROL
for setting variable speed drives

This precision control will set a Graham variable speed drive to 1 part in 4000 as required for machine tool feeds, feeder and pump rates, proportioning control, and other applications. Control can be used with the complete range of Graham drives in sizes from 1/12 to 3 hp, and it sets speeds from any desired maximum to zero and into full reverse. It is available with standard lengths of flexible cable from 1 to 6 ft. Greater lengths can be achieved by combining one or two sections of cable with solid rod extensions. Made by **Graham Transmissions Inc.,** Dept. NED, Menomonee Falls, Wis.

▲ For more details circle **NED-22 B8** on enclosed inquiry slip ▲



This "Shorty" jack (No. 1507) lifts 15 tons 2½ inches yet is only 7" high.

...will raise 15 tons

It has no fluids to leak, no cup leathers to wear out, no air or vapor lock—can be used sidewise, or upside down. It's a precision engineered, ball bearing screw jack with fully enclosed one piece malleable housing, seldom needs lubrication or servicing. Thousands of these easy to operate jacks are saving time and money wherever powerful lifting is required under low set loads. Ask your recognized distributor or write for bulletin AD-12-N, Duff-Norton Co., P.O. Box 1889, Pittsburgh 30, Pa.

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

▲ For more details circle **NED-23 B8** on enclosed inquiry slip ▲

HILD
TRANSFERABLE HEAD VACUUMS

Speed-up maintenance with Hild transferable head vacuums — ideal for all types of heavy volume or bulk vacuuming, including furnace, flue, and air conditioning duct cleaning. Powerful 1⅓ h.p. motor fits any 10, 15, 30, or 55 gallon drum — transfers from drum to drum in seconds for quick cleaning and water removal. Motors can be converted to blower or "Strap-Bak-Vac" for vacuuming in hard to reach areas.

Model 455
55 Gal. Vacuum
1 h.p

Model 655
55 Gal. Vacuum
2-2/3 h.p.

HILD FLOOR MACHINE COMPANY
NED-2-58
1217 Washington Blvd. • Chicago 7, Ill.
Write today for complete information.

▲ For more details circle **NED-24 B8** on enclosed inquiry slip ▲

from INFILCO, leaders in liquid treating equipment

DELIVERS CLEANER COOLANT, DRIER SWARF

REDUCES NUISANCE and COSTS of SUMP CLEANING

IMPROVES WORK QUALITY and PRODUCTION

LESSENS RANCIDITY, HELPS CONTROL DERMATITIS

The INFILCO coolant separator for ferrous metal working is equipped with new type permanent magnets in a liquid tight, non-corrosive drum. It provides more efficient cleaning of soluble oils, chemical coolants and mineral cutting oils. This trouble free equipment meets the demands of today's production line standards. "Timed cycle" operation controls the formation of magnetic brush for maximum removal of contaminants by straining and combing the coolant flow. Solids removed are delivered dry for easy disposal.

The Magnetic Separator is part of the complete INFILCO line of automatic equipment for cleaning, disposal or reclamation of industrial liquids. Capacities from 1 to 2000 gpm.

INFILCO
INFILCO
INCORPORATED
TUCSON, ARIZONA

Please send BULLETIN 9000 ☐
NAME TITLE
COMPANY
ADDRESS
CITY STATE
Ferrous ☐ Non-Ferrous ☐ Coolant ☐ Cutting Oil ☐

INFILCO Inc. Dept. N.E.D. Tucson, Ariz.

▲ For more details circle **NED-25 B8** on enclosed inquiry slip ▲

"CADILLAC"
LOW-COST
WINCH HOIST

Every Hoist PRE-TESTED for MAXIMUM PERFORMANCE MAXIMUM SAFETY

Check these features:

- Precision-built of certified materials.
- High-strength, corrosion-resistant TENZ-ALOY castings. Tensile strength 32,000.
- Light weight and compact.
- Stainless steel springs and shafts.
- Manganese bronze cam reduces pawl wear.
- "Safety-valve" handle breaks at severe overload.
- Drop-forged, heat-treated hooks. Safety hooks available.
- Equipped with galvanized, pre-formed aircraft wire rope.
- Tested to full 50% overload.
- Full year guarantee against defective workmanship and materials.

Easy to operate. Extremely durable. Simple to maintain.

Model 202WX 1½-ton capacity equipped with 20' of 3/16" galvanized wire rope. Lifting ratio approx. 30 to 1. Weight 10 lbs. Min. distance between hooks 25", 20' single, 10' double line. Models from ½ to 2 tons cap. Prices: $29.50 and up.

For your files: Complete specifications and price list for all models. SEND INQUIRY CARD TODAY.

ALUMINUM PRODUCTS, INC.
P.O. BOX 1462-N FORT LAUDERDALE, FLORIDA
For more details circle **NED-26 B8** on enclosed inquiry slip

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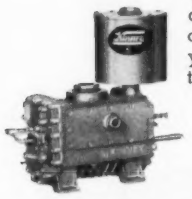

KINNEY High Vacuum Pump

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HIGH VACUUM

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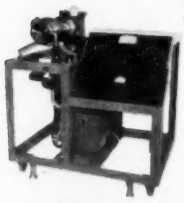

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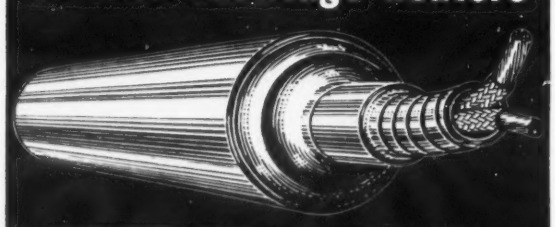
CHROMALOX
electric cartridge heaters



POSITIVE LEAD WIRE PROTECTION FOR STANDARD AND HI-WATTAGE MODELS

New special features help Chromalox electric Cartridge Heaters provide longer life and more dependable spot heat. Use where abrasion or steam, oils or moisture limit heater life.

New high strength spring guard protects against stress and vibration. Moisture-resistant flexible brass conduit provides rugged, vapor-tight, drip-proof cover for lead wires.

Get the full story today. Write for Cartridge Heater Bulletin 850. See other ad on page 69 WI-2641

Edwin L. Wiegand Company
7509 Thomas Boulevard • Pittsburgh 8, Pa.
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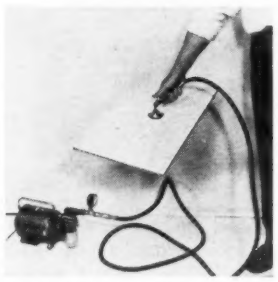
handles parts weighing up to 20 lb



Small, light objects such as dishes, cans, glass or metal sheets, stampings, and components are readily handled with this 20-lb capacity vacuum lifter. It can be powered with a small vacuum pump as shown, or from any plant vacuum line. A neoprene seal handles objects at temperatures below 200° F, while a silicone seal is available for hot objects in the 200 to 600° F range. Release is effected with simple, convenient finger valve. Made by **International Staple & Machine Co.**, Material Handling Div., 802 E. Herrin St., Herrin, Ill.

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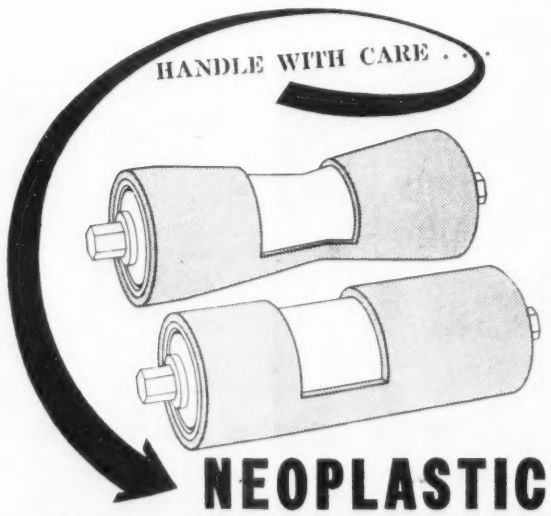

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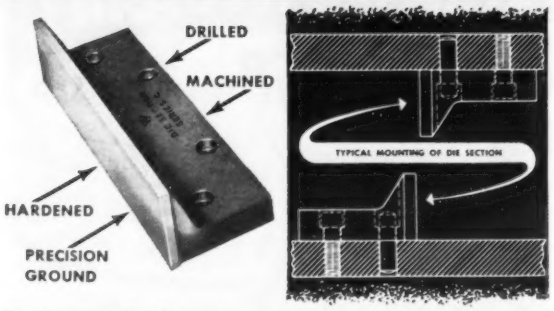

Standardized Die Sections manufactured by R-B eliminate all of your machining, drilling, hardening and grinding. These die sections substantially reduce your die building time.

Series A, B and C die sections have cutting edges of tool steel which are hardened and precision ground. Bases are of mild steel to permit drilling of dowel pin holes.

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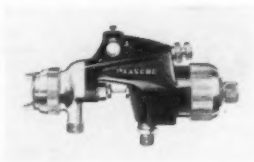
AUTOMATIC SPRAY GUN
spray pattern infinitely adjustable



Dual air valve control on Model 310 automatic spray gun achieves infinite spray pattern adjustment. This allows use of air from fan ports only, center air cap holes only, or an intermixture of any proportion of air from these sources. The two-hose gun requires one hose for fluid and one for air. It has a stainless steel fluid tip and needle as standard equipment and uses Teflon packing. Teflon piston ring does not require lubrication. Made by **Paasche Airbrush Co.,** Dept. 3, 1909 W. Diversey Parkway, Chicago 14, Ill.

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WATER PICK-UP MACHINE
sucks sudsy water, dirt from floor

Self-contained SpeeDry water pick-up machine suctions sudsy water and dirt from the floor along its entire 24-in. wide intake head. The operator merely walks behind and guides the machine through a wet area. Water is picked up from smooth surfaces as well as between seams and cracks of wood, tile, concrete, or asphalt surfaces. Rubber wheels on the intake head allow use flush against walls. Tank is easily emptied. Made by **Nobles Engineering & Mfg. Co.,** 1131 Olympic Blvd., Santa Monica, Calif.

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WELDING & CUTTING TORCH
operates on low to high pressures

Well adapted to construction work and general industrial welding and cutting, this No. 43 welding torch will operate on high, medium, or low pressures. A wide range of styles and sizes of tips is available. Entire torch handle is solderless and all joints are sealed with O-rings. Parts replacement is accomplished on the spot. Oxygen and gas valves use corrugated type thread through the packing area to prevent troublesome end play. Made by **Harris Calorific Co.,** Dept. NED, 5501 Cass Ave., Cleveland, Ohio.

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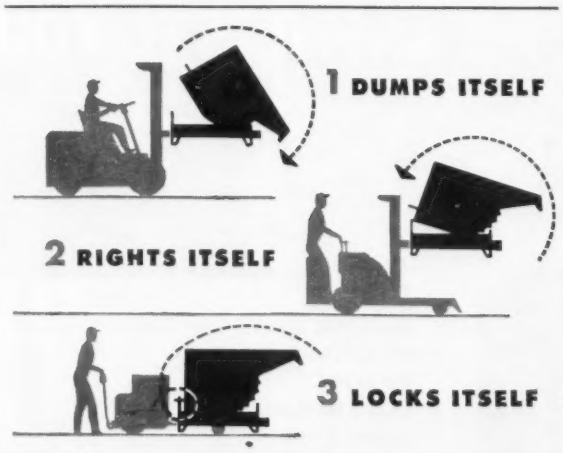

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This rugged Roura Self-Dumping Hopper is built like a battleship . . . extra heavy gauge welded construction . . . to withstand the terrific knocks and bangs of rough usage. Good for years of dependable service. Available in sizes from ½ to 2 cubic yards.

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ROURA *Self-Dumping* **HOPPER**

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Write for Bulletin 10-19. **The Foxboro Company,** 662 Neponset Ave., Foxboro, Mass., U. S. A.

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R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

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EASTERN PORTABLE MIXERS

Portable mixers provide the thrifty answer to many mixing problems. Versatile Eastern Mixers can be quickly shifted from task to task to allow one mixer to serve many needs. Available from 1/20 to 5 H.P. with a variety of speeds and motor enclosures, your small investment in an Eastern Portable quickly pays for itself even if your needs are infrequent and varied.

For complete portable mixer information, write for Eastern Bulletin 520-H.

Eastern INDUSTRIES, INC. Regent St., E. Norwalk, Conn.

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O-KNI-CO MACHINE TOOL news

PRODUCTION FACTS THAT INCREASE YOUR PROFITS

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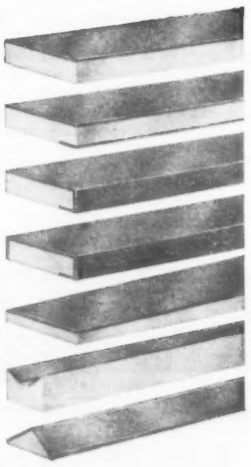
The Ohio Knife Co. is offering machine tool builders and users amazing new hardened ways.

available in 7 standard cross sections in over sixty sizes.



By a time proven process, special analysis tool steel of any thickness is eternally bonded to a soft, tough, easily machinable steel, producing a superior way that will not warp or bow. Special O-KNI-CO hardening process (65-66 Rockwell C) to full depth of tool steel, along entire length of way, develops tremendous wear-resistant qualities, practically eliminating galling or scoring. The result is a continuing high degree of accuracy of the machine under even the severest work loads.

Gisholt Machine Company gives unique demonstration to prospective lathe buyers

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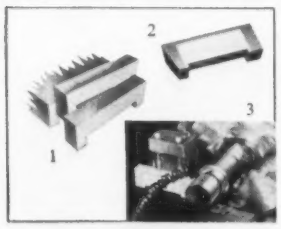

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COMPANY _____
ADDRESS _____
CITY _____ STATE _____

7610

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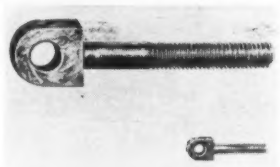
LATCH BOLTS
offered in range of sizes



Machined from the solid and cyanide hardened for maximum toughness, this line of latchbolts is available from stock. Standard and long lengths are made with ¼, 5/16, ⅜, ½, and ⅝-in. threads by **Northwestern Tools, Inc.**, 127 Hollier Ave., Dayton 3, Ohio.

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CARTRIDGE HEATER
¼ in. diameter unit reaches 1250° F

Available in any length from 1 in., this ¼-in. diameter cartridge heater is designed to provide localized heat to restricted areas requiring close thermal control. Unit has stainless steel sheath and reaches surface temperature of 1250° F. Standard lead length is 10 in., with longer lengths available. Standard wattage ratings are supplied on basis of 50 w per square unit of surface, with higher ratings available depending on application. Made by **Hotwatt, Inc.**, 110 Gould St., Danvers, Mass.

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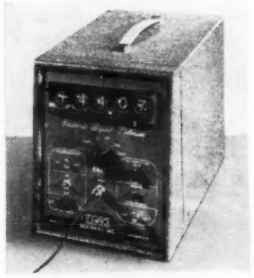
ELECTRONIC DIGITAL VOLTMETER
offered in 3 and 4-digit readouts with 98 or 980/sec encoding rates



This electronic digital voltmeter, or high speed encoder is offered in 4-digit visual readout model EDR and the 3-digit readout model EDV. Former is accurate within 0.01 per cent and encodes at rate of 98 per second, whereas latter is accurate to 0.05 per cent and is made in 98 and 980 per second encoding rates. Units operate on time modulation principle in which the input voltage to be measured is compared to a generated linear sawtooth or sweep voltage. When coincidence occurs, a time delayed pulse is generated. This delay is proportional to magnitude of input direct-current voltage.

Instrument is used with analog computers, data logging, laboratory measurements, and in quality control operations. All models offer choice of binary 1-2-4-8 or 1-2-4-2 codes or staircase voltage, in addition to gated frequency and pulse width outputs for data storage. Units are made either rackmounted or portable by **Servonics, Inc.**, Dept. SV, 822 N. Henry St., Alexandria, Va.

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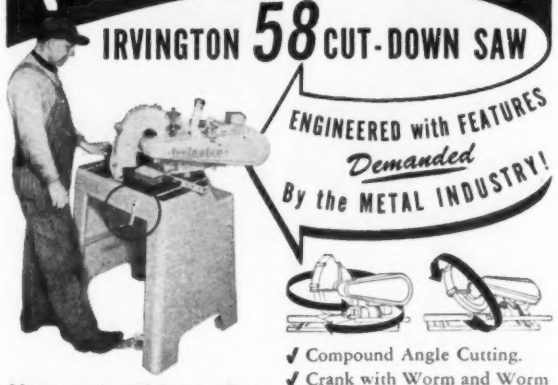
ENGINEERED with FEATURES *Demanded* By the METAL INDUSTRY!



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5. Locate each tool, loaned or in crib.
6. Eliminate delays, save time.

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11 leading metalworkers tell how they get perfect straightness

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- The two plane and the rotary methods compared
- Mack-Hemp straighteners—design features
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- The entry and delivery tables
- Tube lubrication
- Single or multi-speed AC drives versus variable speed
- Supplemental uses for rotary straighteners
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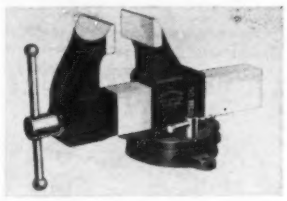
Division of
E. W. BLISS COMPANY
901 Bingham Street, Pittsburgh 3, Pa.

BLISS ®

▲ For more details circle **NED-52 B8** on enclosed inquiry slip ▲

SHEET METAL VISE

4½ in. wide jaws open 9 in.

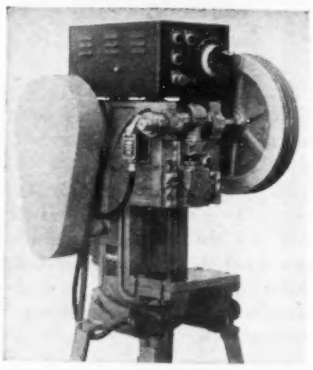


High, tapered, 4½ in.-wide jaws and extra deep, smooth, heat-treated, steel faces are featured by Model 224½ vise designed for sheet metal, auto body, or wood work. It has swivel base which locks in any position. Work can be shifted for grip at different angles without removing it from vise. Self-lubricating graphite bronze bearing assures easy operation, prevents wear, and eliminates end play. Jaws of the 60-lb vise open to 9 in. Made by **Columbian Vise & Mfg. Co.**, 9023 Bessemer Ave., Cleveland 4, Ohio.

▲ For more details circle **NED-53 B8** on enclosed inquiry slip ▲

SAFETY PUNCH PRESS

key locks this "fail safe" machine in single, inch, or foot control



Complete safety for operator of this 8-ton Electro - Safe punch press is assured by built-in controls. Using the press in single-trip position requires that operator depress two separated hand controls and hold them until the ram reaches the bottom of the stroke. Press will not operate if either button is fastened down.

A high starting torque motor delivers power directly to the crankshaft, and motor stops after each single-trip cycle. Machine can be stopped instantly with easily reached "stop" button which disconnects power and applies a heavy duty brake. Any mechanical or power failure causes press to stop instantly. Machine can be locked in continuous, inch, single, or foot control with key issued only to authorized personnel.

Electronic switching permits cycling to start and stop with the ram in any position, or as often as desired in any one cycle. Standard open-back inclinable and 12¾-in. deep throat models are available. Made by **Kenco Mfg. Co.**, Dept. NED, 5211 Telegraph Rd., Los Angeles 22, Calif.

▲ For more details circle **NED-54 B8** on enclosed inquiry slip ▲

Safety Shoes

Lehigh Safety Shoe Co.—More than 70 types and styles of safety shoes for men and women in industry are described in 16-page catalog. Offered is guidance on selecting the best sole and shoe construction for various hazards.

▲ For more details circle **NED-55 B8** on enclosed inquiry slip ▲

30th KISCO tomorrow's ENGINEERING TODAY

30 YEARS of Engineering Skill and Manufacturing Prowess

Automation at its Best in KISCO-MATIC WATER SOFTENERS

Completely dependable, fully automatic in operation . . . supplying all the pure rain-soft water you need without manual attention.

No Levers
No Switches
No Valves to turn
Nothing to Set
Nothing to Forget
Write for Catalog

Tomorrow's Engineering . . . TODAY

Kisco Boiler & Engineering Co.
2400 DE KALB ST. ST. LOUIS 4, MO

▲ For more details circle **NED-56 B8** on enclosed inquiry slip ▲

WEBB **TOWVEYOR***

for FASTER, SAFER & EASIER MATERIALS HANDLING

FASTER travel from loading to unloading stations—trucks are delivered to proper destination without wasted traveling time.

EASIER handling—trucks engage Towveyor chain by lowering tow pin and are disengaged at any point by raising of tow pin.

SAFER floors—Towveyor eliminates overhead chains and supports and employees can safely walk or truck over any portion of the system.

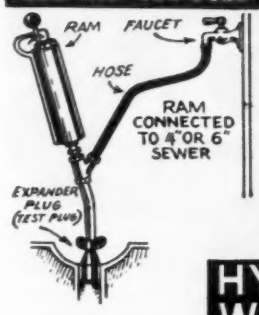
Cut your costs with a Towveyor system that will efficiently speed up your materials handling.

*Towveyor is a registered trademark identifying floor truck conveyors patented, manufactured and installed by the Jervis B. Webb Company.

JERVIS B. WEBB CO.
Conveyor Engineers and Manufacturers
8921 ALPINE AVE. • DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES

▲ For more details circle **NED-57 B8** on enclosed inquiry slip ▲

CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent* or *no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, *plus* set of 5 tapered adaptor plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!

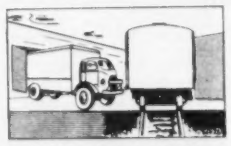
HYDRAULIC MANUFACTURING CO.
DEPT.-NED-2 KIEL, WISCONSIN

▲ For more details circle **NED-58 B8** on enclosed inquiry slip ▲

does your loading dock LEAK MONEY?

IT DOES IF IT'S NOT PROTECTED BY A DAZZO LOADING DOCK-DOOR SHELTER!

HERE'S WHY—A Dazzo retractable loading dock-door shelter provides a safe, dry, draft-free passageway between the door of your building and the door of the freight car or truck.
This saves you important money these four ways:



1. **It prevents spoilage and damage.**
2. **It cuts heating cost and improves working conditions by sealing off drafts.**
3. **It lowers compensation insurance rates by preventing slipping and accidents.**
4. **It saves man hours by speeding loading regardless of weather and by cutting absenteeism.**

CONSIDER THESE FACTS! Dazzo shelter anchors permanently on the building wall around the door. It retracts or extends in 10 seconds. No tugging, no springs; it works by gravity. Eight different models custom tailored to fit every need.

PLANT EXPANSION? Before you build or modernize your shipping facilities, send for a free copy of "Loading Dock Shelters". Contains valuable "do's and don'ts" that can make your new Loading Dock a money-saver.

DAZZO PRODUCTS
INCORPORATED
Dept. D, 152 Bleecker St., N. Y. 12, N. Y. • OR 3-5298

DAZZO PRODUCTS, INC. D2-58
152 Bleecker St., N. Y. 12, N. Y.
FREE CATALOG!
Please send me "Loading Dock Shelters".
Name .....
Company .....
Address .....
City, State .....

▲ For more details circle **NED-59 B8** on enclosed inquiry slip ▲

Your insides feel like a SAND STORM

YOU NEED A

DUPOR AUTOMATIC

Water-Cooled Respirator

Sponge filter saturated in cool, clear water provides moist air for comfortable breathing. Ideal protection against dust, fumes, smoke, paint spray. Full panorama visibility. Can be worn with goggles or glasses. Work refreshed, order a water-conditioned respirator today! Sample, $2.25 postpaid.

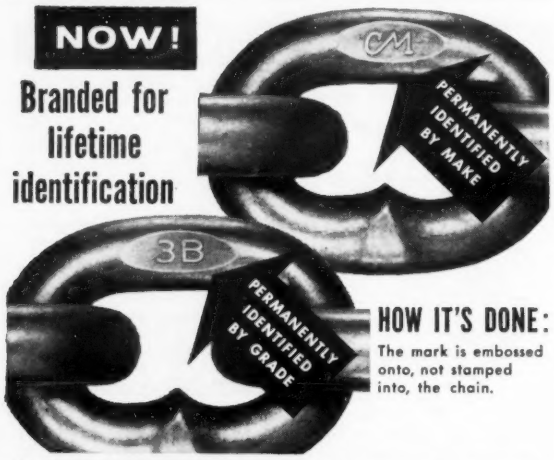
H. S. COVER, P. O. Box 2508
South Bend 14, Indiana

"Respirators for Industry since 1894"

For more details circle NED-65 B8 on enclosed inquiry slip

NOW!

Branded for lifetime identification



HOW IT'S DONE: The mark is embossed onto, not stamped into, the chain.

CHAIN BUYERS & USERS—Now you can be sure of the make of chain you are getting and of the grade (strength) of the chain you are using...a definite safety advantage. Presently available on Inswell Proof Coil, BBB, High Test and Herc-Alloy chain in all sizes under ½".

SPECIFY "CM" CHAIN

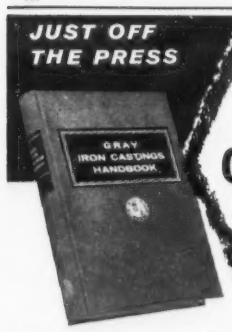
CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
Regional Offices: NEW YORK
CHICAGO • CLEVELAND
SAN FRANCISCO • LOS ANGELES

In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

For more details circle NED-66 B8 on enclosed inquiry slip

JUST OFF THE PRESS



The Most Useful Handbook Ever Written on

GRAY & DUCTILE IRON CASTINGS

620 pages; 6 x 9; 415 illustrations.

Published by the **GRAY IRON FOUNDERS' SOCIETY, INC.**

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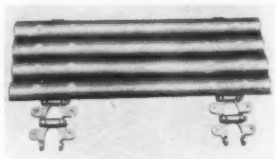
Dept. N, National City-E. 6th Building,
Cleveland 14, Ohio

Name_____
Company_____
Address_____
City_____ State_____

For more details circle NED-67 B8 on enclosed inquiry slip

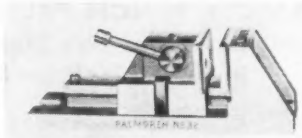
CHAIN SLAT CONVEYOR
uses wood, plastic, or metal slats



Any length slatted apron using wood, plastic, or metal slats can be used on this steel chain slat conveyor. Steel slats are shown mounted on forged steel, heat treated chain links. Chain is suitable for long, hard wear and is shock resistant. Single or multiple strands of chain are used, depending on slat width. Slats number eight to the foot. Made by **Robert A. Main & Sons, Inc.**, 271 Pascack Rd., Paramus, N. J.

For more details circle NED-68 B8 on enclosed inquiry slip

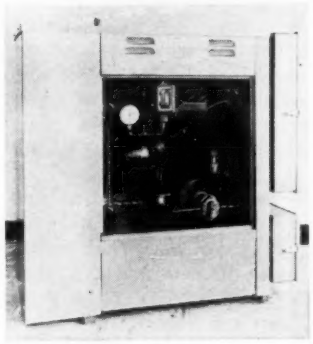
QUICK-LOCKING VISE
employs cam and Y-lock mechanism



A cam and Y-lock mechanism effects fast locking action on the Palmgren No. 32 Quick Lock Vise designed for production drilling, tapping, and assembly work. Only a flick of the locking lever releases the quick lock, allowing movable jaw to slide to any position. Vise weighs 2½ lb, has 2⅛-in. jaw width, 1½-in. jaw opening, and 1¼-in. jaw depth. It is 2 5/16 in. high, 7 in. long, and is quickly attached to machine or bench by means of two bolt slots. Sides, as well as top and bottom are machined square. Made by **Chicago Tool & Engineering Co.**, 8378 S. Chicago Ave., Chicago 17, Ill.

For more details circle NED-69 B8 on enclosed inquiry slip

ELECTRIC STEAM GENERATORS
1/3 to 5-hp units for up to 100 psi



Series of portable, plug-in electric steam generators in sizes from ⅓ to 5 hp provides on-the-spot, high or low pressure, dry and odor-free steam. Ready-to-use steam is produced within 5 min at any location, at low pressures from 0 to 15 psi and high pressures up to 100 psi. Generators are practical for use in air conditioned and crowded areas because electric steam creates little or no heat. Typical applications are in the chemical, heat treating, food processing, plastics, and rubber industries. All units bear ASME miniature boiler code approval. Made by **Electro-Steam Generator Corp.**, 2013 Duke St., Alexandria, Va.

For more details circle NED-70 B8 on enclosed inquiry slip

Buschman "QUICK-EEZ" Aluminum Wheel & Roller Conveyors

NOW! Exclusive "QUICK-EEZ" Coupling means easy to use—easy to move standard units.

Both ends the same—"QUICK-EEZ" Coupling, keeps your system *flexible* for *customized* handling. Set-up or rearrangement is faster—more economical.

Portable yet rugged, lightweight gravity conveyors by Buschman make it easy to set-up efficient systems for better handling in all types of industries.

Available from stock in standard 12" & 18" widths, 5 and 10 ft. sections and 90° curves. Adjustable tubular stands and accessories save time and cut costs.

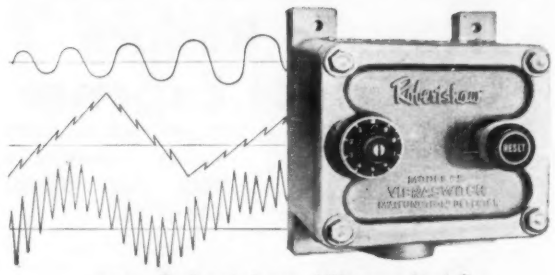
Specialized assistance upon request Write today for Bulletin 19

THE E. W. BUSCHMAN COMPANY
C-344-EWB 4482 Clifton Avenue, Cincinnati 32, Ohio

Builders of All Types of Conveying Machinery

For more details circle NED-71 B8 on enclosed inquiry slip

PREVENTS HARMFUL VIBRATION



new Robertshaw Vibraswitch® "Malfunction Detector"

Detects improper operation and anticipates component failures of rotating or reciprocating equipment

Actuates alarms or shuts down equipment when vibration exceeds the set limit

Responds to all kinds of vibration effects

Can ignore temporary, excessive vibration during start-up or normal operation

Simple and trouble-free . . . many types and housings available

® patents pending

SEND FOR BULLETIN
AERONAUTICAL AND INSTRUMENT DIVISION

Robertshaw-Fulton CONTROLS COMPANY

SANTA ANA FREEWAY AT EUCLID AVENUE • ANAHEIM, CALIFORNIA

For more details circle NED-72 B8 on enclosed inquiry slip

BANISH WASHROOM TROUBLES!

FOOT-CONTROL

Excerpt from article in *Modern Sanitation* Magazine

Most people have tried to wash their hands in standard wash basins equipped with separate hot and cold water faucets controlled by spring shut-offs, and have been annoyed by the difficulty of the operation. If the person has normal sensibilities, he dislikes stopping the basin and running water in on the soil residues of previous users; so, the hot water usually being too hot to use untempered, he turns on the cold faucet and holds it open with one hand while wetting the other, then reverses hands, then applies soap.

BRADLEY Duo washfountains

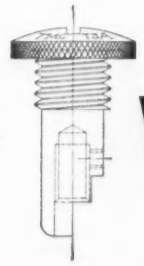
A touch of the foot on the foot-pedal supplies tempered water instantly from the sprayhead—there are no faucets (regular or spring type) to touch—no chance of spreading infection or *wasting water*. And the bowl is self-flushing to prevent collection of used water.

One Bradley Duo serves one or two persons at one time—piping connections are reduced by 50 per cent—maximum sanitation assured. Used in office employee washrooms, schools, mills, institutions, public buildings.

Write for Bulletin K1204

BRADLEY WASHFOUNTAIN CO.
2253 W. Michigan St. Milwaukee 1, Wis.

For more details circle NED-73 B8 on enclosed inquiry slip



WHY?

Why can Teale successfully bid on and produce parts such as this one? One of the reasons is that the new

AUTOMATION MACHINING

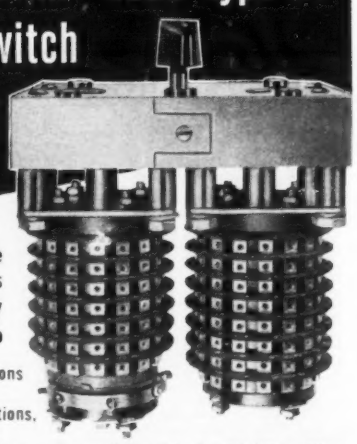
process used in its manufacture enables Teale to perform in one single handling the 12 operations involved: Tapering, Broaching, Cross Drilling, Cross Tapping, Knurling, Slotting, Milling, Roll Threading, Trepanning, Drilling, Shaving, and Marking.

Ask for Teale Folder which outlines the possibilities of this new process.

TEALE MACHINE CO. INC.
1423 UNIVERSITY AVE.
ROCHESTER 7, N. Y.

For more details circle NED-74 B8 on enclosed inquiry slip

"GEARED-PAIR" ESCO type HT Rotary Switch Assembly



Doubles the number of circuits controlled by a single knob

- Sections — 24 sections per assembly.
- Positions — 16 positions, one being OFF.
- Poles — one per section, two sections/pole for 16 ON positions.
- Electrical Rating — 5 amperes 125 volts a-c, 0.80 power factor.
- Contacts — break-before-make, standard.
- Action — detent action, 22½° indexing.
- Movement — unlimited rotation in either direction.

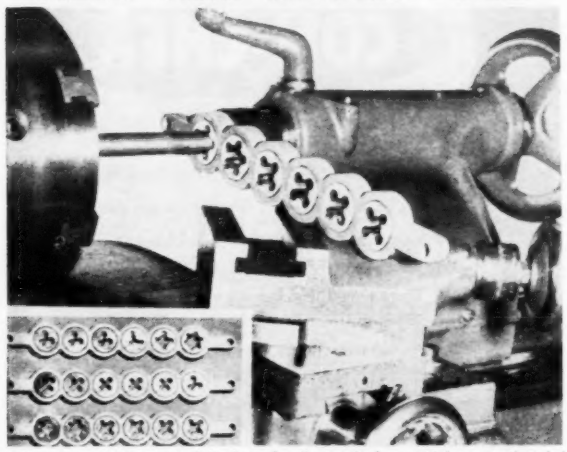
Special assemblies to meet your particular requirements will be supplied.

Write today for further information on the ESCO "Geared-pair" Type HT rotary multipole switches.

ESCO of WEYMOUTH
ELECTRO SWITCH CORPORATION
Weymouth 88, Massachusetts

▲ For more details circle NED-75 B8 on enclosed inquiry slip ▲

NEW TIME-SAVER TOOL



When your machine or tool is down for the need of a special screw, threaded shaft or rod, this threading tool is ready to cut 18 different size threads, on lathe, drill press or at the vise. Your mechanics will save the time it takes to look for and mount dies in holder.

All dies std. 1" O.D., sizes ½" to ⅛" U.S.S. & S.A.E.

1/2 -13	5/16-18	10-32	NOTE — Exclusive feature, face of each die is parallel with back of holder. Dies are adjustable within holder by three allen cone point screws. Holders in black magic finish
1/2 -20	5/16-24	8-32	
7/16-14	1/4 -20	6-32	
7/16-20	1/4 -28	5-40	
3/8 -16	12 -24	1/8 pipe	
3/8 -24	10 -24	1/4 pipe	

DURING OUR SPECIAL INTRODUCTORY OFFER

All orders sent on a 10-day approval basis. Order direct.

Complete set of three holders with 18 adjustable high grade dies, sizes as shown above. **$39**

MOHR TOOL & MFG. CO., Box 63-G, Maywood, Ill.

▲ For more details circle NED-76 B8 on enclosed inquiry slip ▲

NOW! Immediate delivery on low-cost ultrasonic cleaning equipment you can afford!

Priced from $175.00—full 2-year warranty

Series 600 $350

SPECIFICATIONS
Inside tank dimensions: (Model NT-602) 9¼" x 6" x 5"; one gallon capacity; stainless steel.
Generator: 10" x 8½" x 9½"; 115V-AC; selector switch to alternate between two tanks.
Complete unit is portable and compact.

narda SONBLASTER

Now, thanks to Narda's mass production techniques, you can get top ultrasonic cleaning equipment with a full two year guarantee, at the lowest prices in the industry! What's more, Narda's new SonBlasters are available now — off-the-shelf — for immediate delivery!

Plug the Narda SonBlaster into any 115V-AC outlet — fill the tank with the cleaning solution of your choice and flip the switch. In seconds, you'll be cleaning everything from hot lab apparatus to medical instruments, optical and technical glassware to clocks and timing mechanisms, electronic components and semiconductors to motors, relays and bearings. In short, you'll clean almost any mechanical, electrical, electronic or horological part or assembly you can think of — and do it faster, better and cheaper.

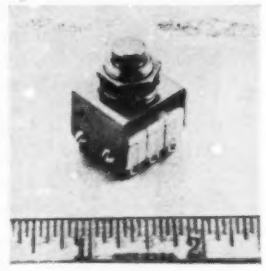
Narda SonBlasters — a complete line of production-size units with the quality, power, performance, capacity and appearance of cleaners selling up to three times the price. From $175 to $1200.

For more information, write to: Dept. NED-1

the narda ultrasonics corporation
HERRICKS ROAD, MINEOLA, L. I., NEW YORK
Subsidiary of The Narda Microwave Corporation

▲ For more details circle NED-77 B8 on enclosed inquiry slip ▲

SMALL ACTUATOR operates three subminiature switches



Measuring only 1 x 1¼ x ¾ in., this panel mounted, overtravel plunger-type actuator will operate three subminiature switches at the same time. Switches used with actuator have minimum contact resistance and can handle low voltage, milliampere circuits. Actuator demonstrates high level of repeatability over several hundred thousand cycles. Along with the switches, actuator assembly is offered as a standard item. Made by **Robertshaw-Fulton Controls Co.**, Acro Div., Columbus 16, Ohio.

▲ For more details circle NED-78 B8 on enclosed inquiry slip ▲

MOLDED NYLON PARTS design kit is offered free

Comprehensive assortment of molded nylon parts provided in this free samples kit provides the designer with a typical cross-section of modern nylon applications. Samples are practical for experimental work and serve as models of good design for mass production by injection molding. Kit is available free by writing to **Nylomatic Corp.**, Dept. T-1, 107 W. Trenton Ave., Morrisville, Pa.

▲ For more details circle NED-79 B8 on enclosed inquiry slip ▲

WET-DRY VACUUM CLEANER has 10-gal capacity tank

Everything from floor to ceiling, including bare floors, walls, carpeting, upholstery, bins, shelves, venetian blinds, overhead pipes, and furnace boilers, can be cleaned by the Model 500 wet-dry vacuum cleaner. It has a moistureproof motor, 10-gal capacity tank, 10-in. easy-roll wheels, handle, and tool basket. Attachments are available. The ½-hp universal type motor drives a two-stage turbine up to 13,000 rpm at full load. Dry capacity is 1½ bu and water lift is 63 in. with closed orifice. Made by **Clarke Sanding Machine Co.**, Dept. PB, 30 E. Clay Ave., Muskegon, Mich.

▲ For more details circle NED-80 B8 on enclosed inquiry slip ▲

A gentle chime... a BLASTING horn

...or a complete audio-visual communication system

You can depend on Sperti Faraday for the latest in sound and sight communications. For complete information write: Sperti Faraday, Adrian, Michigan. In Canada—write Sperti Faraday of Canada, Ltd., Montreal.

Utility Chime
Cat. No. 1531

SPECIALISTS IN:
Fire Alarm Systems
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Since 1875 Designers and Producers of Visual and Audible Signals

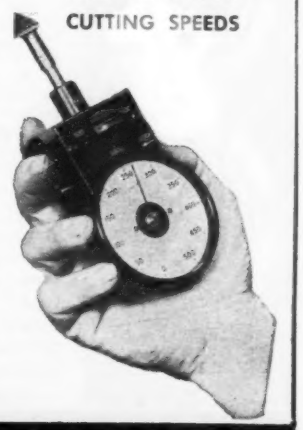
Sperti Faraday Inc.
ADRIAN, MICHIGAN

▲ For more details circle NED-81 B8 on enclosed inquiry slip ▲

SMITHS TACHOMETERS

For Precise and Rapid Measurements of

SHAFT SPEEDS
SURFACE SPEEDS
CUTTING SPEEDS



- **Magnetic Design** Steady readings accurate to ±0.5% at any part of any scale.
- **Instantaneous Reading** No timing or waiting.
- **Self-Powered** Needs no battery. Always ready for immediate use at full accuracy.
- **Nine Ranges** To 50,000 rpm on highest. Interpolate tenths of rpm on lowest.
- **Overspeed Protection** Inherent and built-in.
- **Hold Button** "memorizes" reading when desired.

Complete Service Facilities *Send for Details and Literature*

CLARENCE J. MARX CO.
Box 4033, Cleveland 23, Ohio

▲ For more details circle NED-82 B8 on enclosed inquiry slip ▲

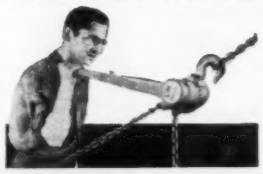
LIFTS and PULLS at ANY angle . . .

Move machinery, pull boiler tubes, join belts, set pipe, lift motors—for 1001 uses pick up a

¾ TON MODEL WEIGHS ONLY 13 LBS.

CM PULLER

- Operated by a ratchet handle requiring no more effort than an automobile jack. Objects up to 12,000 lbs. can be lifted or pulled . . . vertically, horizontally or at any angle. Anyone can operate. Automatic brake holds loads at any point. Inexpensive. Sturdy. Safe. CM-Alloy flexible welded load chain.



Send for **PULLER** Bulletin 146 Illustrated and with prices.

Capacities: ¾ to 6 ton

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

▲ For more details circle NED-83 B8 on enclosed inquiry slip ▲

"FIGHT" ALL FIVE!

WITH

Markal Paintstik MARKERS!

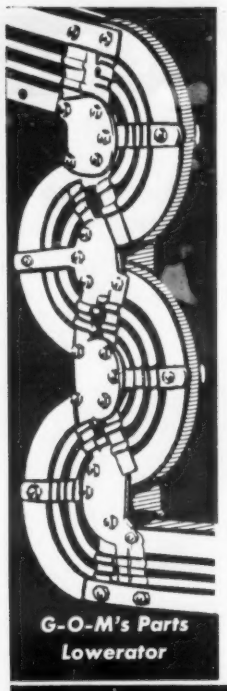
PERMANENT—FADEPROOF —WEATHERPROOF

Marks remain visible under any extremes of heat up to 2100°F. or cold down to —50°F. and under any weather conditions. Marks stay on until *you* want them off.

Free Sample Paintstik; state your marking conditions.

MARKAL COMPANY
3053 West Carroll Avenue
Chicago 12, Illinois

▲ For more details circle NED-84 B8 on enclosed inquiry slip ▲



Don't just move your parts—

Control them Automatically!

You can do it easily and inexpensively with pre-engineered parts-handling units from Gear-O-Mation. The full line is made up of versatile equipment to control parts into, through or from any process stage. These cost-saving units can be readily adapted to your parts for small-shop automation or full lines.

Washers	Storage Units
Elevators	Skew Loaders
Conveyors	Basket Loaders
Loaders	Distribution Systems
Unloaders	Assembly Devices
Orientors	Size Classifiers
Hoppers	Demand Feeders

Write for free literature

GEAR-O-MATION
DIVISION OF MICHIGAN TOOL COMPANY
7171 E. McNICHOLS RD. • DETROIT 12, MICH.

For more details circle NED-85 B8 on enclosed inquiry slip

Specify WILBOW for Your SILICONE Rubber Parts

WILBOW silicone rubber parts have many desirable characteristics in addition to excellent stability under temperature extremes (−125° to +600° F). Silicone may be the answer to your problem if your parts require low compression-set, good dielectric properties, resistance to ageing, sunlight or ozone, exceptional release from sticking or other characteristics not commonly found in natural rubber or other synthetics.

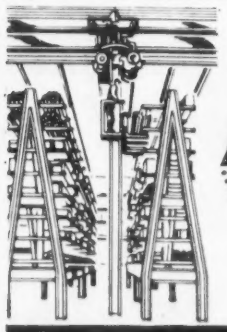
We are well experienced in producing silicone parts by techniques such as molding, extruding, calendering, bonding or punching from sheet. Let us know of your requirements.

Send for New WILBOW Catalog
It will become your handbook of rubber goods

Wilbow

The WILLIAMS-BOWMAN RUBBER Co.
1954 South 54th Avenue • Cicero 50, Illinois
Mfrs. of molded, punched, extruded and cut rubber goods. Specialists in producing rubber covered rolls, silicone rubber parts and bonding rubber to metal

For more details circle NED-86 B8 on enclosed inquiry slip



use your Air rights . . .

INCREASE HANDLING EFFICIENCY, SPEED MATERIAL MOVEMENT, SAVE SPACE, TIME, MONEY WITH

TRAK-RAK®

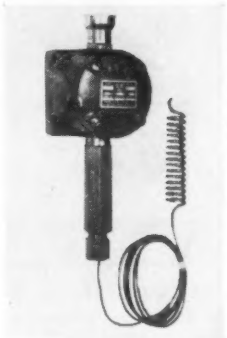
A TRAK-RAK System saves valuable floor area by permitting vertical material storage and handling, yet provides faster, safer in-and-out of storage handling than on the floor operation. TRAK-RAK gives you better inventory and parts control, lowers handling costs, improves material delivery. Over 200 TRAK-RAK systems installed in companies like Alcoa, Carson Pirie Scott & Co., Chain Belt Co., Du Pont, Westinghouse, General Electric, etc.

Write for details . . .

CTC CHICAGO TRAMRAIL CORPORATION
1310 S. Kostner Avenue • Chicago 23, Illinois

For more details circle NED-87 B8 on enclosed inquiry slip

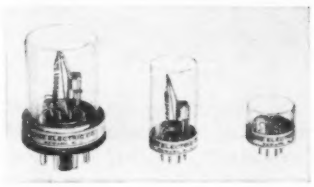
TEMPERATURE CONTROL
wide range unit is explosionproof



Micrometer adjustment built into the D95 temperature control provides accurate, wide-range control in hazardous locations where explosive vapors or gases are present. It is composed of integrally assembled remote bulb thermal device and control head with connecting capillary tubes of varying lengths. Standard head compensation is effective from −65 to 160° F. Temperature settings are made with a calibrated knob. Models have ranges between −150 and 650° F with on-off differentials of 1 and 2° F, or Centigrade equivalent. Normally-open, normally-closed, or double-throw switches, rated for 15 amp at 115 or 230 v ac, are single-pole and suited for 180° F ambient temperatures. Made by **United Electric Controls Co.**, 79 School St., Watertown 72, Mass.

For more details circle NED-88 B8 on enclosed inquiry slip

TIME DELAY RELAYS
thermostatically operated units



High shock and vibration characteristics are built into the Thermaline thermostatically operated, time delay relay. The miniature unit has stainless steel relay elements and is offered in glass or metal enclosures. Delays as low as 250 milliseconds are possible. The 1/8-in. diameter silver contacts can carry 3 amp at 115 v, 60 cycles, noninducting, for a minimum of 250,000 operations. Operating voltages are from 6 to 115 v, timing ranges (normally open or normally closed) from 1/4 sec to 3 min, and timing tolerance on any range is ±10 per cent of total time. Heater operates on alternating or direct current. Octal, seven and nine-pin miniature, standard, and subminiature sizes are offered. Made by **Line Electric Co.**, Corner 14th Ave. & Sixth St., Newark 3, N. J.

For more details circle NED-89 B8 on enclosed inquiry slip

CORRECTION

In the description of the Ready-Heat electrical heating tape (*NED-70 M7, Dec. '57*), it was erroneously stated that this tape was "UL approved." We apologize for our error in making this statement. This 6 to 60-ft long plug-in type heating tape which can be wrapped around pipelines or used for other purposes is made by Cox & Co., Dept. NED, 115 E. 23rd St., New York 10, N. Y.

For more details circle NED-90 B8 on enclosed inquiry slip

AIR-MITE

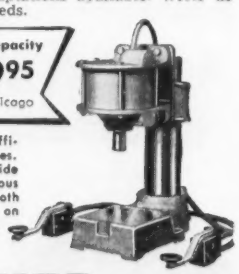
HIGH PRODUCTION AIR PRESS
with more Quality Features

★ Solid Steel Column. Greater strength and rigidity.
★ Brass cylinder, aluminum end castings, Hy-Car piston cups.
★ Accurately ground table.
★ Fast set-up and stroke adjustment.

You don't have to "baby" an AIR-MITE Press because they're ruggedly built to stand the gaff of production work. From the tip of their solid steel column to the heavy base, they're every inch a workhorse tool. Feature-for-feature, you can't buy a better, more economical operating press than an AIR-MITE.

Special adaptations available. Write us your needs.

1 Ton Capacity
$89.95
F. O. B. Chicago



New 3 Way Control Valve. For safer, more efficient press work, use AIR-MITE Control Valves. Connected in parallel and positioned on either side of an air press, they provide a safe, instantaneous press operating control. Operator must depress both handles to actuate press . . . keeps attention on work-piece, hands out of the way. For pressures up to 160 p.s.i.

AIR-MITE Devices, Inc.
4405 W. KINZIE • CHICAGO 24, ILL.

For more details circle NED-91 B8 on enclosed inquiry slip

Hobbs HOUR METERS for

MEASUREMENT OF USE
PROTECTIVE MAINTENANCE

Operating Time of Production and Service Equipment — AT A GLANCE!

To obtain maximum use of production and service equipment, it is essential to know the hours of operation. This information permits accurate study of utilization; also provides data needed for protective maintenance which improves performance and lengthens service through regular attention at the right time.

Hobbs Hour Meters indicate to the HOUR and MINUTE the time of equipment operation. Not a revolution counter, but a true timing instrument. ALTERNATING CURRENT meters time the operation of any equipment powered by a-c electricity; DIRECT CURRENT meters, the operation of any equipment powered by internal combustion engine or battery.

● Distributors in Principal Cities
WRITE FOR CATALOG 600

JOHN W. Hobbs CORPORATION
A DIVISION OF STEWART WARNER
2055 YALE BLVD. SPRINGFIELD, ILLINOIS

For more details circle NED-92 B8 on enclosed inquiry slip

CON-CHEK®

- A New Type Hole Relation Gage.
- The finest Hole Relation Gage available.
- It's an instrument of the highest precision.
- Read the indicator directly, without turning either your hand, or the gage handle.
- The knurled thumb-knob rotates the extension spindle.
- As the outer shaft of the pilot remains stationary, wear is greatly reduced.
- Indicator and dial setting completely protected.
- Every CON-CHEK hardened and ground, with chromed pilot and hardened gage pins.
- CON-CHEK is available in a full range of models, made up of stock components.

Write for literature.

engineers and builders of special machines, tools and gages

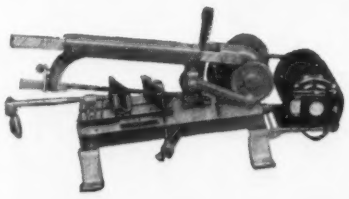
Mayes Tool Co.
26514 W. Seven Mile Road • Detroit 40, Michigan

For more details circle NED-93 B8 on enclosed inquiry slip

KELLER

POWER HACKSAWS

Fast cutting KELLER Power Hacksaws have been improved to give you still faster cutting.



JEFFERSON 601 with 4" x 4" capacity has fast acting vise that swivels 45°, pressure relief on back stroke. A fast cutting bench model at LOW COST.

Heavier guide bars and sturdier guide bar support arms allow more pressure on saw blades for still faster cutting with KELLER Power Hacksaws. Choose your next saw for maintenance or tool room from 10 KELLER models, bench or floor, wet or dry cut.

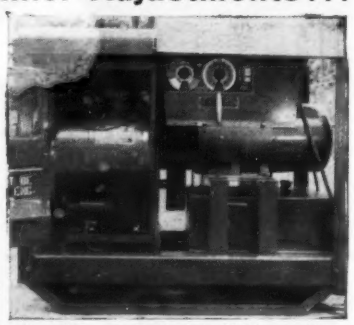
Ask your KELLER DEALER or write for Bulletin No. 257

Sales Service Machine Tool Co.
2365 University Avenue • St. Paul W 14 A, Minn.

For more details circle NED-94 B8 on enclosed inquiry slip

3,143 OPERATING HOURS
with only Minor Adjustments...

SERVICE RECORD of this WISCONSIN-POWERED Arc Welder



Maintenance Division user reports:

"Has operated exceedingly well . . . approximately 3143 operating hours . . . maintenance has been negligible after a few minor adjustments; appreciate fact that servicing is so simple; we are free of anti-freeze . . . no fooling with gadgets of water-cooled engines."

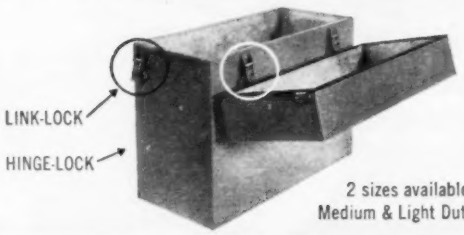
Basic load-holding High Torque, heavy-duty design and construction in all details, foolproof all-weather Air-Cooling and *exclusive specialization* in the design and manufacture of AIR-COOLED Engines are some of the factors that are responsible for Wisconsin Engine preference wherever dependable, economical power is required.

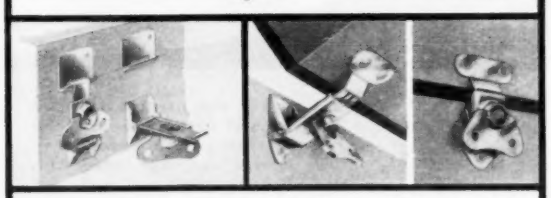
You can't do better than to specify "Wisconsin Power" for your equipment. Write for Wisconsin Engine Bulletin S-223.

WISCONSIN MOTOR CORPORATION
World's Largest Builders of Heavy-Duty Air-Cooled Engines
MILWAUKEE 46, WISCONSIN

▲ For more details circle **NED-95 B8** on enclosed inquiry slip ▲

Matched hardware for all-around pressure on hinged-cover containers!





LINK-LOCK provides high-strength, pressure-tight seal without springs. A half-turn disengages for opening.

HINGE-LOCK permits application of sealing pressure along hinge line; becomes free-operating hinge when released.

SEND TODAY for complete information.
Engineering service available • Samples on request

SIMMONS FASTENER CORP.
1793 North Broadway, Albany 1, New York

▲ For more details circle **NED-96 B8** on enclosed inquiry slip ▲

PENNSYLVANIA SCALES

FAST... ACCURATE COUNTING when your PROFIT IS IN THE BALANCE

Pennsylvania Counting Scales protect your profits in two ways . . . by speeding production counting and weighing . . . and by precision accuracy that eliminates profit-stealing waste and over-weights.

- Counting Scales
- Over/Under Scales
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- Industrial Scales
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- Special Purpose Scales

FREE BOOKLET

Don't let hand counting or incorrect counting scales waste your money. Write for copy of "Counting Scale Cost Saving Report" . . . explains procedures and gives valuable tips.

Golden Anniversary 1908 1958 PENNSYLVANIA SCALE COMPANY BAREVILLE, PA.
PENNSYLVANIA SCALES
Pennsylvania Scale Company • Bareville, Pa.

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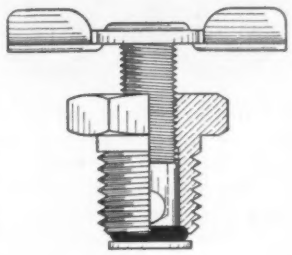
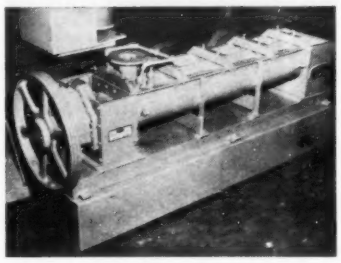
AIR TANK DRAIN COCK removes accumulated moisture

Accumulated moisture which results from compressing air can be removed from high pressure air tanks by this drain cock which seals 500 psi with minimum closing effort. Equipped with a neoprene O-ring, it has a ⅝-in. hexagon brass body with a 7/16-in. 20 UNF-2A external thread. Handle is zinc-plated steel. Made by **A. G. Kaddis Screw Products Co.**, 312 Hudson Ave., Rochester 5, N. Y.



▲ For more details circle **NED-98 B8** on enclosed inquiry slip ▲

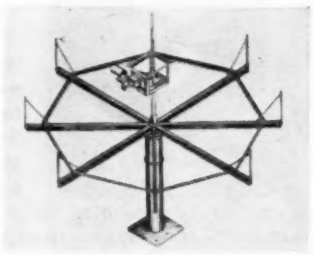
CONTINUOUS MIXER for dense or viscous materials



Homogenous mixes of high density or high viscosity materials are provided by this double-arm continuous mixer. The high speed, heavy duty machine has a capacity of ½ to 4 cfm of dry mixes or difficult-to-disperse powdered materials. Built for installation in a process pipeline, the illustrated 7-ft machine has 7-in. mixing chambers and can be equipped for vacuum operation with temperature-controlling jackets for heating and cooling. Made by **Capitol Products Corp.**, Read Standard Div., Dept. 100, York, Pa.

▲ For more details circle **NED-99 B8** on enclosed inquiry slip ▲

EIGHT-BOOM JIB CRANE rotates for automation uses



Automation in painting, cleaning, plating, and other operations is made possible by this hydraulic-electric indexing jib crane that has eight booms radially located about the hydraulic pillar. Latter provides rotary action and moves up and down. Mechanism is automatic, and time intervals of each phase in a cycle can be predetermined and adjusted. Initial models have 2000-lb total capacity and a linear speed at the periphery of the booms of 30 fpm. Variations of these specifications are possible. Made by **David Round & Son, Inc.**, 35025 Aurora Rd., Cleveland 22, Ohio.

▲ For more details circle **NED-100 B8** on enclosed inquiry slip ▲

Rugged New Vacuum Gauge *With Six Ranges Covering Pressures from 1000 mm. to 0.1 micron*

NRC Model 520

The new NRC Model 520 Alphatron (R) Ionization Vacuum Gauge is equally ideal for the laboratory and production floor. It is both precisely accurate and nearly immune to abuse. Ruggedized new circuitry eliminates troublesome components, minimizes contamination effects, and provides highly stable and linear amplification. A direct reading, total pressure gauge with almost instantaneous response, the Model 520 is accurate to ± 2% and linear over the entire range. Drift is less than 0.5% despite wide line voltage variations. It is especially useful with a recorder or controller and makes an efficient leak detector. Write today for Bulletin G-20

NRC Equipment Corporation
Subsidiary of National Research Corporation
Dept. 29-P Charlemont Street Newton 61, Mass.

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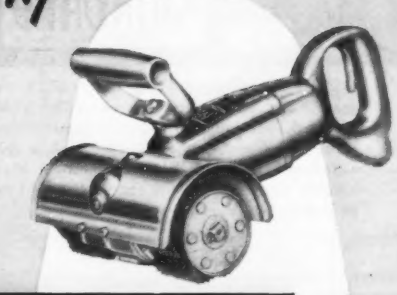
Chip Away



SCALE
RUST
PAINT

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write for complete details

AURAND MFG. & EQUIPMENT CO.
1322 Ellis St., Cincinnati 23, Ohio

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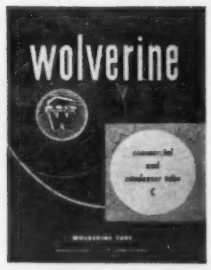
SEARCHING FOR A SOURCE FOR COPPER AND COPPER-BASE ALLOY TUBE?

SEND FOR



MADE IN U.S.A. TO THE STANDARDS OF AMERICAN INDUSTRY

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

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MAKE YOUR OWN SOUND MOVIES . . . THIS EASY, INEXPENSIVE WAY

Here, in one compact, portable unit is all you need to make your own sound movies.

This new Kodascope Pageant Sound Projector, Magnetic-Optical, is both a superb sound projector *and recorder.*

Take any kind of 16mm film, sound or silent, and have a magnetic striping added for about 2½¢ per foot. Then run it through your Magnetic-Optical and record *your* own sound.

Mix voice with music, add from other sound sources, record on the spot, blend automatically. Erase, alter, re-use the magnetic stripe at will. Change your message to fit special groups, as often as you wish.

And *project* every kind of 16mm film (sound or silent) with the same ease, brilliance, fine tone, and freedom from maintenance that you get from *every* Pageant.

Interested? Write for full details.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

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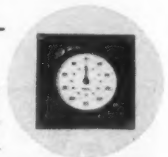
precision timers ...by STANDARD TRADEMARK

Industry's preferred "instrument of a thousand uses". Accurate, rugged, versatile STANDARD Elapsed Time Indicators. Synchronous motor drive. Electric clutch controlled by manual or automatic switch or output of electronic tubes. Manual or electric zero reset. Units for flush panel mounting or portable use.

Model	Scale Divisions	Totalizes	Accuracy
S-100	1/5 sec.	6000 sec.	±.1 sec.
S-60	1/5 sec.	60 min.	±.1 sec.
SM-60	1/100 min.	60 min.	±.002 min.
S-10	1/10 sec.	1000 sec.	±.02 sec.
S-6	1/1000 min.	10 min.	±.0002 min.
S-1	1/100 sec.	60 sec.	±.01 sec.
MST	1/1000 sec.	.360 sec.	±.001 sec.
MST-500	1/1000 sec.	30 sec.	±.002 sec.


PANEL MOUNTED

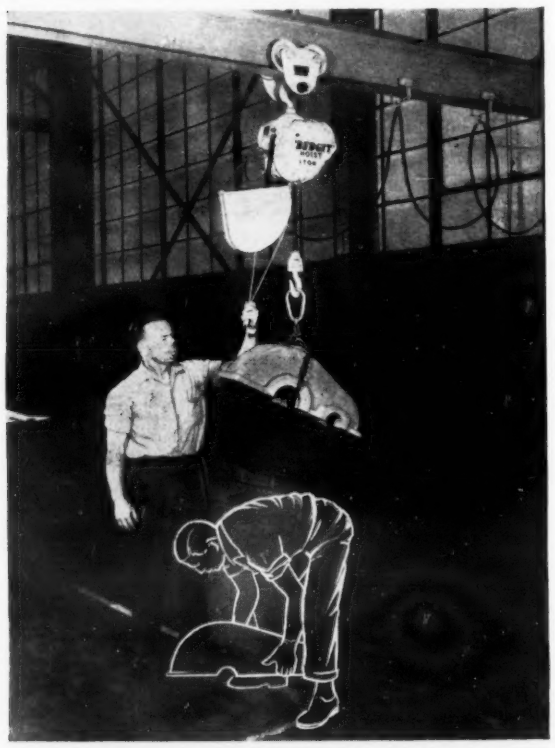
PORTABLE

Request Bulletin No. 198.

THE STANDARD ELECTRIC TIME COMPANY

89 LOGAN STREET • SPRINGFIELD, MASS.

For more details circle NED-105 B8 on enclosed inquiry slip



Let us demonstrate — right in your plant or shop — how 'Budgit' Hoists can make your lifting problem disappear.

FREE DEMONSTRATION
In YOUR Plant or Shop

Make us prove how 'Budgit' Hoist can solve YOUR lifting problem

Your local 'Budgit' Electric Hoist distributor now makes you this special offer:

He'll bring a 'Budgit' Hoist to the spot you name, hang it up, plug it in, and show you how 'Budgit' can make your lifting job fast, safe and effortless.

No obligation. Demonstration takes only minutes. All you need is a place to hang the Hoist and an electrical outlet AC or DC (or 12-volt battery).

The 'Budgit' Electric Hoist can handle any kind of load up to 2 tons, indoors or out. One-hand control leaves your hand free to guide the load. Hairline stops and starts let you "spot" your load gently within 1/100th of an inch. Two automatic brakes give complete safety.

CALL YOUR SHAW-BOX DISTRIBUTOR TODAY or write for your copy of bulletin 402 and 404. No obligation of course.

58A-1

'Budgit'® ELECTRIC HOISTS

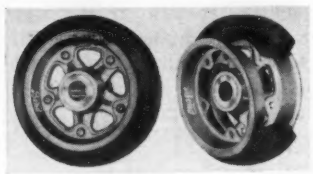
MANNING, MAXWELL & MOORE, INC.
SHAW-BOX CRANE & HOIST DIVISION
400 West Broadway • Muskegon, Michigan

Builders of "SHAW-BOX" and 'LOAD LIFTER' Cranes, 'BUDGIT' and 'LOAD LIFTER' Hoists and other lifting specialties. Other Divisions produce 'ASHCROFT' Gauges, 'HANCOCK' Valves, 'CONSOLIDATED' Safety and Relief Valves, 'AMERICAN' and 'AMERICAN-MICROSEN' Industrial Instruments, and Aircraft Products.

In Canada: Manning, Maxwell & Moore of Canada, Ltd., Avenue Road, Galt, Ontario.

For more details circle NED-106 B8 on enclosed inquiry slip

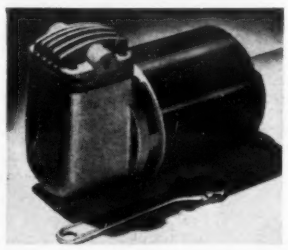
RUBBER-TIRED WHEELS
have keyed flange sections



Keying the two sections of these demountable rubber-tired wheels eliminates any shearing strain on the bolts and simplifies assembly. Only the tire need be changed, not the entire wheel. The hub, an integral part of one flange, cannot become loose between the flanges. Tire tread is mounted permanently to a hard base. Soft, easy-rolling G-1, hard G-2, and oil-resisting neoprene G-3 compounds are available. Made by **Bond Foundry & Machine Co.**, 306 Penn St., Manheim, Pa.

For more details circle NED-107 B8 on enclosed inquiry slip

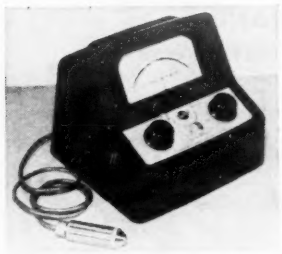
DIAPHRAGM PUMP
delivers oil-free air in low volume



Vacuum up to 22 in. Hg, pressure up to 40 psi, and maximum displacement of 1 cfm at free flow are offered by this diaphragm pump, designed for continuous operation. It delivers oil-free air, is quiet, and weighs only 16.7 lb. Pump has a G-E Form G motor and operates on 115 v, 60 cycles, although 220-v, 50 or 60-cycle motors are available. A neoprene-nylon valve gasket and diaphragm precludes "freezing," rusting or jamming. Made by **Air-Shields, Inc.**, Dept. 17, Hatboro, Pa.

For more details circle NED-108 B8 on enclosed inquiry slip

ELECTRONIC COMPARATOR
unaffected by current fluctuations



Accurate process gaging on the machine or at the operation site can be done with this S.I. electronic comparator consisting of steel tipped gaging head and amplifier which records magnified movement on a dial. When used on dimensionally equal parts, needle repeats reading in 1/20 sec. Temperature changes, voltage fluctuations of ±15 per cent, or 40-60 cps frequency changes produce no change in zeroed dimension. Tips are interchangeable with those of different materials and contours. Left knob is used to zero in pointer from master workpiece, whereas right on-off knob switches magnification from coarse to fine. Accessories are available. Made by **Threadwell Tap & Die Co.**, 230 Arch St., Greenfield, Mass.

For more details circle NED-109 B8 on enclosed inquiry slip

Protect personnel during welding operations

IPCO WELDING CURTAINS

Confines the welding operation to a given area; protects other workers and passers-by from harmful rays, flying chips and scale. Made of flameproofed canvas (Underwriter's Approved Treatment) or asbestos, complete with eyelets for suspending on rod or pipe support.

Write for Bulletin No. 43

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

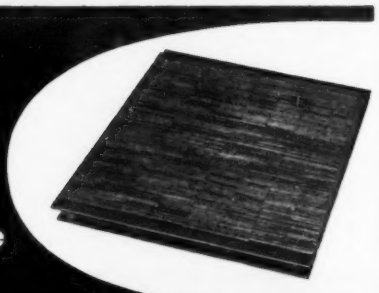
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-110 B8 on enclosed inquiry slip

For more details circle NED-111 B8 on enclosed inquiry slip

NEW! FLEX-O RUBBER FLOOR PADS

...Cut Product damage ...reduce floor Maintenance costs



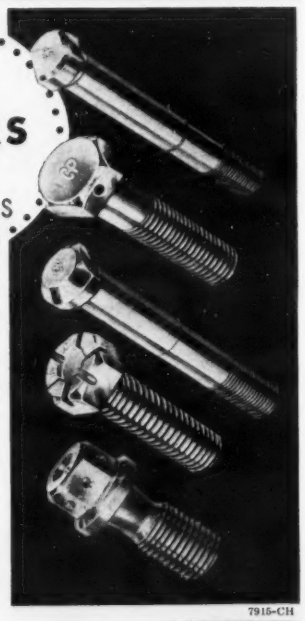
■ Now you can protect dropped products and floors with low cost FLEX-O floor pads. Built for heavy duty service, they are made with steel channel frames and laminated segments of resilient rubber reinforced fabric. They are available in two standard sizes for use on the floor and for recessing into specially built floor pockets.

Write for detailed literature.

FLEX-O BUMPERS, INC.
Subsidiary of Rowe Methods, Inc.
2534-F Detroit Ave. • Cleveland 13, O.

For more details circle NED-112 B8 on enclosed inquiry slip

precision metal **FASTENERS** to your specifications



Chandler makes "precision" a reality . . . not just a "catch word". Here's how . . . constant production control assures high quality fasteners with the ultimate in uniformity, accuracy . . . and economy. Chandler's rigid inspection standards mean you get fasteners that provide maximum resistance to stress, vibration and shear. For over 25 years Chandler has supplied the automotive, engine and aircraft industries with . . .

- ★ Self-Locking Place Bolts
- ★ Connecting Rod Bolts
- ★ Automotive Special Bolts
- ★ Special Aircraft Engine Bolts
- ★ "AN" Aircraft Engine Bolts
- ★ "NAS" Aircraft Bolts

If you're looking for fasteners to meet your very special requirements, write us today.

7915-CH

Write today for 'Bulletin 1264-CH

CHANDLER PRODUCTS CORPORATION
1495 Chardon Road • Cleveland 17, Ohio

For more details circle NED-113 B8 on enclosed inquiry slip

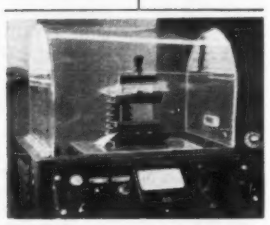
Test-Proven for Superiority...

ACCURATE TAPES

FRICTION, RUBBER, PLASTIC

TENSILE

ADHESION



DIELECTRIC

Send today for our most recent bulletin describing details.

ACCURATE MANUFACTURING CO.
GARFIELD, NEW JERSEY

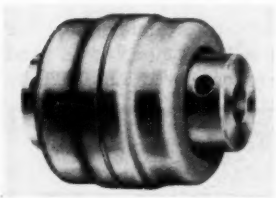
For more details circle NED-114 B8 on enclosed inquiry slip

STENCILING SET
includes inker, letters, tape

Quick - drying, permanent ink that can be used on wood, paper, metal, aluminum, plastics, and other materials is contained in the Stencileer, included in the Magic Marker stenciling set. Also found in the set are 76 individual letters, an easel of coated paper, and masking tape to hold the letters down. The Stencileer is used by removing its cap and rubbing the mohair head across the reusable letters. Set sells for $2.50. Made by **Speedry Products,** Dept. NED, Box 97, Richmond Hill, Jamaica 18, N. Y.

For more details circle NED-117 B8 on enclosed inquiry slip

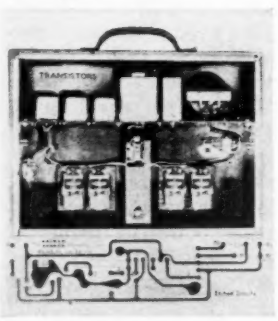
FLEXIBLE COUPLING
is high torque, high speed unit



Capable of handling angular misalignment up to 5 degrees, parallel offset to 0.01 in., and axial end play to 0.09 in., Metro-Flex couplings provide constant rotational velocity. They transmit torques up to 150 oz-in., permit speeds to 10,000 rpm, minimize backlash, and operate over a temperature range of −10 to 250° F. They are offered with hubs bored for 3/16, 1/4, 5/16, or 3/8-in. shafts and have an over-all diameter of 1.078 in. Made by **Metron Instrument Co.,** 436 Lincoln St., Denver 3, Colo.

For more details circle NED-118 B8 on enclosed inquiry slip

TRANSISTORIZED PIPE LOCATOR
sensitive to 18-ft depth



Tracing distance of about 200 ft with sensitivity to 18 ft depth is featured by this pipe locator. Unit employs transistors and printed circuitry, and operates on small flash light batteries. With components encapsulated in five different "packages," temperature, humidity fluctuations, shock, and vibrations present no problem. Locator has automatic power switching for all "on-handle" operations and automatic turn-off when set is not being used. When cases are clamped together unit measures 12½ x 9½ x 5½ in. Made by **Goldak Co.,** 1540 W. Glenoaks Blvd., Glendale 1, Calif.

For more details circle NED-119 B8 on enclosed inquiry slip

2548

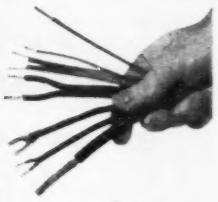
DIEMAKERS! this DIE-PART PORTELVATOR®
(OR AN ENGINEERED VARIANT)
will speed your work and ease your "handling."
Top plate raises and lowers for fitting operations and rotates 360° to give easy access to die.

Write for our FREE Bulletin No. 2548. It gives full details.

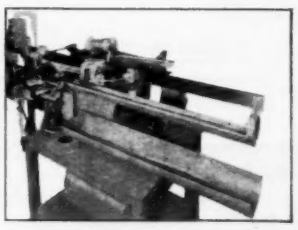
THE HAMILTON TOOL COMPANY • 901 HANOVER STREET
HAMILTON • OHIO • U. S. A.

For more details circle NED-121 B8 on enclosed inquiry slip

ANOTHER TIME AND LABOR SAVER for finishing wire leads with ARTOS AUTOMATIC CS-6



A new collecting device is now available for the popular Artos CS-6 wire-measuring, cutting and stripping machine. Illustration shows the new collecting trough (AE-478). Upper trough collects wire leads up to 60 inches long, then empties them into lower trough after wire has been cut, thus saving operator time.



Production speed of 3000 finished wire leads per hour up to 15 inches long. Maximum cutting length is 194 inches... stripping up to 2 inches on one or both ends. Artos also offers machines that measure, cut, strip and attach terminals at one or both ends.

Write for Bulletin on CS-6. Engineering consultation without obligation.

Visit us at I.R.E. Show, Booth No. 4228

ARTOS ENGINEERING CO.
2751 South 28th Street • Milwaukee 46, Wis.

For more details circle NED-122 B8 on enclosed inquiry slip

Send for this fact-filled catalog of high pressure PLASTIC LAMINATES

★ POSTFORMING LAMINATES
★ ELECTRICAL INSULATION STOCK
★ ENGRAVING STOCK
★ GEAR STOCK
★ BEARING STOCK
★ PRINTED CIRCUIT STOCK

● Experienced Farlite engineers will analyze your product requirements, help you select materials, and recommend the best manufacturing techniques. Write TODAY!

FARLITE® PLASTICS DIVISION
FARLEY & LOETSCHER MFG. CO.
DUBUQUE, IOWA

For more details circle NED-115 B8 on enclosed inquiry slip

NOW! SOLVE THAT LOW DOCK PROBLEM Economically
NEW HI-LO AUTOMATIC DOCKBOARD

Model 1208; 8' long by 6' wide. Model 1210; 10' long by 6' wide.

SAVES TIME Backing truck automatically adjusts long, wide ramp surface . . . speeds loading. Does away with labor-wasting placement and storage of loose plates.

SAVES EXPENSE The HI-LO is simply lagged to top of present dock. Can't be lost, stolen, or damaged. Simple counterbalance system. No hydraulics, motors, or controls.

IMPROVES SAFETY No more loose plate hazards. No lifting or straining. The HI-LO is a permanent part of the dock . . . cannot slip out of position.

HI-LO Automatic DOCKBOARDS
WRITE FOR COMPLETE LITERATURE
KELLEY COMPANY, INC.
2125-A W. Mill Road
Milwaukee 9, Wisconsin

For more details circle NED-116 B8 on enclosed inquiry slip

DESIGNED FOR SUPERIOR SERVICE

Liquids Vapors Gases

ROTARY JOINTS
Steam pressures to 150 PSI, fluids to 350 PSI — also vacuum service. Speeds to 1,750, temperatures to 425° F. Send for Bull. #14.

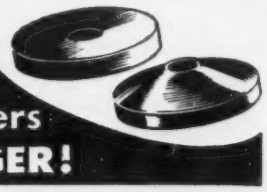
SWIVEL JOINTS
Pressures to 3,500 PSI, temperatures to 350° F for industrial applications. Special aircraft types meet or exceed Spec. MIL J-5513. Send for Bull. #15.

CHECK VALVES
For Aircraft & Industrial applications. Pressures to 3000 PSI. Temperatures from − 300° F. to 750° F. First choice of USN Submarine Service. Mfg. to Mil. Spec. MIL-V-5524-A. Send for Bull. #16.

SEALOL
SEALOL CORP, 262 Post Road, Providence 5, R. I.

For more details circle NED-120 B8 on enclosed inquiry slip

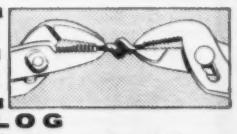
CREST Heat-Pruf™ Faucet Washers LAST LONGER!



- Independent laboratory tests prove it!
- Last from 2 to 10 times longer by actual test!
- Eliminate nuisance and high cost of washer replacement!
- One of thousands of dependable Crest plumbing maintenance products — attested by Master Plumbers!

Try it yourself! Rugged "Pliers Test" proves tough Crest washers can really take it. Severe torture tests will not harm Crest washers.

FREE CATALOG



Write today for complete 200-page 1958 Crest Catalog illustrating over 3,000 Quality Plumbing and Heating Maintenance Specialties.

Gentlemen: At no obligation, please send me a FREE copy of the new 1958 Crest Catalog.
Name ..... Title .....
Company or Institution .....
Address .....
City ..... State .....

CREST MANUFACTURING COMPANY
4-65 48th Avenue, Long Island City 1, New York

For more details circle NED-123 B8 on enclosed inquiry slip

NEW Stainless Steel Clip Never Loses Its Grip

Rockwood Stainless Steel bracket-clip comes in sizes to hold articles of 7/8", 1 1/8" and 1 1/2" diameter.

Rockwood Bracket-Clip to have wide industrial use keeping things hung-up-and-handy . . . 3 wanted sizes . . . tough, tight and durable.

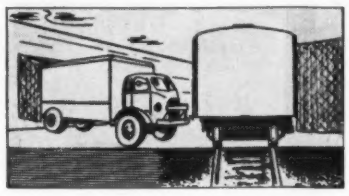
At last here's the wall bracket-clip that industry has needed. Rockwood developed it to keep fire fighting equipment firmly anchored, yet handy for instant use. Industry is now using it for easy access to everything from brooms and crowbars to tools.

But this is no household broom-closet clip. It's made to live a plant life . . . strong holding power, resilient (but not too), resists corrosion, abuse, oils and acids. It is made of stainless steel in sizes to hold items of approximate equivalents to 7/8", 1 1/8" and 1 1/2" diameters. A great chance to put your shop in order. For catalog and price information, write Rockwood Sprinkler Company, Portable Fire Protection Division, 2129 Harlow Street, Worcester 5, Mass.

ROCKWOOD

For more details circle NED-124 B8 on enclosed inquiry slip

LOADING DOCK-DOOR SHELTER fits all size freight cars, trucks



This retractable loading dock - door shelter adjusts automatically to any size freight car or truck. It operates by gravity to completely enclose the area from the car or truck door to the loading dock, assuring safe, dry, draft-free passage. Merchandise and workers are protected from cold, rain, and weather. Dual expansion frame is anchored to the building wall or doorway. Shelter projects only 8 1/2 in. from the wall when retracted. Fabric covering is reinforced, mildewproof, pliable, khaki duck Vivatex. Made by **Dazzo Products Inc.**, Dept. R, 152 Bleecker St., New York 12, N. Y.

For more details circle NED-127 B8 on enclosed inquiry slip

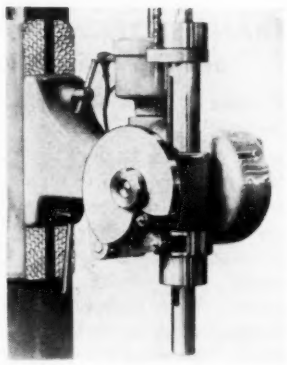
GREEK LETTERING GUIDE has upper and lower case letters

Preparation of laboratory reports is among uses for this Greek lettering guide. The 1/8-in. upper and lower case Greek letters are engraved on 0.020-in.

transparent plastic. List price of template No. 60 is $2.20. Made by **Du-All Templates**, 3549 Villanova, Dallas, Tex.

For more details circle NED-128 B8 on enclosed inquiry slip

CAM DRILL FEED controls travel up to 3-3/16 in.



Medium to large production drilling runs at relatively low cost are achieved with the Edlund Cam Feed. Mounted externally on left side of drill spindle sliding arm, feed controls travel up to 3 3/16 in., including rapid advance and feed. Drive to cam is supplied through worm and worm gear powered from a gear train at upper portion of spindle. Feed cycle is started by pushbutton or foot switch, and feed is engaged or disengaged through electromagnetic clutch located in worm shaft. Electrical sequencing is achieved with indexing devices or special fixturing. Made by **Edlund Machinery Co.**, 36 Huntington St., Cortland, N. Y.

For more details circle NED-129 B8 on enclosed inquiry slip

Add Functions and Improve the Performance of Your Equipment

HYDRECO FLUID POWER

Leading makers of Lift Trucks, Construction and Earth Moving Vehicles, Farm Machinery and Machine Tools use HYDRECO Gear and Vane Type Pumps and Fluid Motors, HYDRECO Valves and Cylinders as original equipment. Add versatility, dependability and sales appeal to mobile equipment and production machinery with HYDRECO components in your hydraulic systems.

Get HYDRECO Bulletin 309

Gives you the facts you want to know about Gear Type Pumps and Fluid Motors for 1500 psi applications and the famous Dual-Vane Pumps and Motors for 2000 psi continuous duty. Describes HYDRECO Directional Control Valves, as well as Check Valves, Pressure and Flow Rate Controls and Single-Acting, Double-Acting and Telescopic Cylinders.

Write to Dept. 9008-2

THE NEW YORK AIR BRAKE COMPANY
KALAMAZOO DIVISION • KALAMAZOO, MICHIGAN

For more details circle NED-131 B8 on enclosed inquiry slip

pump MAINTENANCE got you down...

Look into these IR MAINTENANCE-FREE pumps for general hydraulic service

- Double Mechanical Shaft Seal eliminates stuffing box attention
- Permanently Lubricated Sealed Bearings never need oiling or greasing

Heads: to 350 ft.

Capacities: 250 to 2400 gpm

For complete information, send for Bulletin 7248-A.

Ingersoll-Rand
10-584
11 Broadway, New York 4, N.Y.

For more details circle NED-125 B8 on enclosed inquiry slip

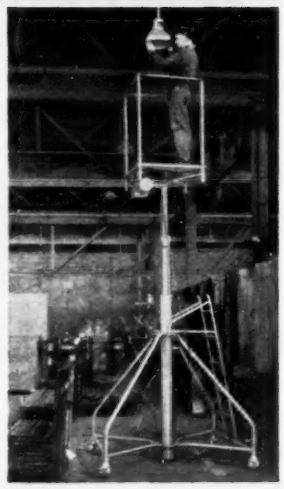
1-MAN TOWER S-T-R-E-T-C-H-E-S TO REACH OVERHEAD WORK— SHRINKS TO CLEAR DOORS

Foot-Button Control with Battery Power or 110-volt a-c Plug-In

HIGH-LEVEL MAINTENANCE can be completed faster, better and cheaper with this handy one-man work tower!

Moto-Lift ROLLS to the job and locks . . . RISES hydraulically under control of a foot button on the platform . . . LOWERS quickly and safely . . . TELESCOPES to clear low, narrow doors and aisles.

12-volt d-c battery operated model is *self-contained* —can be used anywhere. 110-volt a-c plug-in model has 50-ft. cable to permit work *along 100 ft.* from one electric outlet. Elevates 6'8" to 17'. 400-lb. capacity.



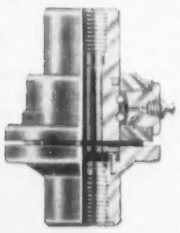
Write for FREE BULLETIN 72

SAFWAY STEEL PRODUCTS, INC.
6213 W. State St., Milwaukee 13, Wis.

For more details circle NED-132 B8 on enclosed inquiry slip

Now- A TROUBLE-FREE SWIVEL JOINT FOR HOT GAS AND STEAM SERVICE... THE CHIKSAN DISCPAK

New design permits changing packing without removing joint from the line.



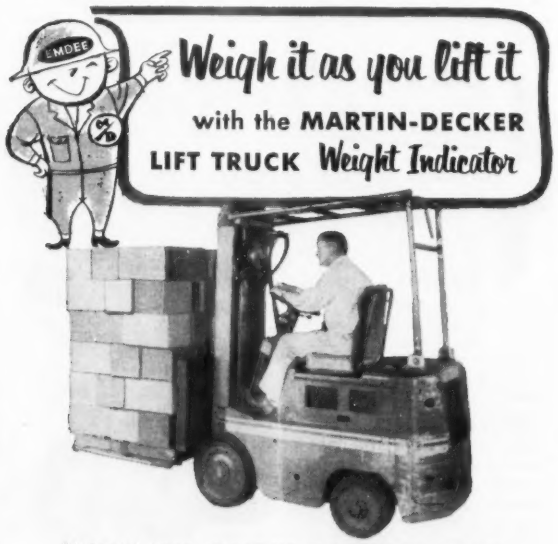
Created specifically for service on lines employed in steam and hot gas service, the new Discpak has a temperature rating of 600°F., a pressure rating of 300 psi. Disc-seal housed between two sections of the swivel joint provides a fluid tight seal. Discpaks installed by customers unable to keep previous joints operating effectively for more than 3 months have been in service for over a year with no report of product failure. Write for literature and prices today.

Send for Bulletin DP100

CHIKSAN COMPANY
Brea, California; Chicago 5, Illinois; Newark 2, New Jersey
Subsidiaries: Chiksan Export Co.; Chiksan of Canada Ltd.

For more details circle NED-126 B8 on enclosed inquiry slip

Weigh it as you lift it with the MARTIN-DECKER LIFT TRUCK Weight Indicator



KNOW THE WEIGHT OF EVERY LOAD

As you lift it!

Here's the accurate, convenient, safe low-cost way to prevent overloads—totalize truck car loadings—simplify weight inventories—insure floor weight distribution—

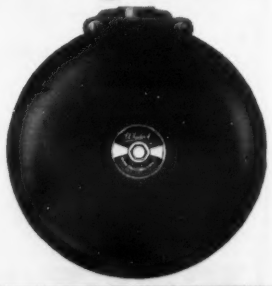
Write for Descriptive Bulletin. S-7

MARTIN-DECKER CORP.
HOME OF THE WEIGHT INDICATOR — LONG BEACH, CALIFORNIA

For more details circle NED-130 B8 on enclosed inquiry slip

bells... from the smallest to the largest

The finest bells are engineered and manufactured by WHEELOCK. Indoor and outdoor types are available in sizes from the new 2 1/2" midget a-c contactless vibrating bell to the large 20" model—[2 1/2", 3", 4", 6", 8", 10", 20"]. Write for Catalog 5A-



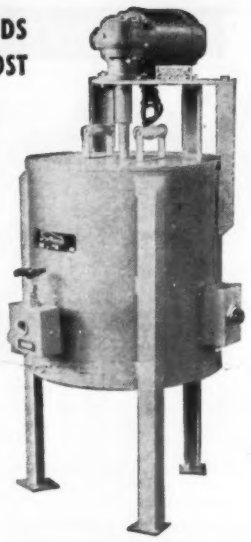
originators of the underdome bell

SOLD THROUGH ELECTRICAL WHOLESALERS

Wheelock SIGNALS INC.
SIGNALS — LONG BRANCH, N. J.

For more details circle NED-133 B8 on enclosed inquiry slip

MELT COMPOUNDS AT LOW COST



This Sta-Warm compound melter, model Y, with selective temperature control, heated gate valve and power driven agitator makes simple work of melting a wide variety of industrial compounds *economically, uniformly, dependably.*

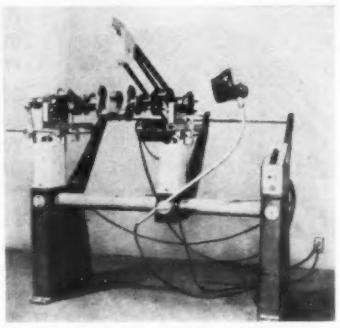
Capacities from 5 to 2000 gal. Voltages to 550-v. Widely used and preferred because of its high efficiency in heating critical materials without burning and also without leaving cold unheated lumps to clog outlet.

Ask for complete catalog literature today on this and on other Sta-Warm melting equipment. No obligation.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

For more details circle NED-134 B8 on enclosed inquiry slip

INDUSTRIAL BALANCER
handles 1/4 to 300 lb parts



Rotating engine or machinery parts weighing from 1/4 to 300 lb and measuring from 1/4 to 30 in. can be balanced to 0.004 oz-in. on this Model 702 electronic industrial balancer. Balancer is set up without using special fixtures, alignment, or coupling. Trunnion bearings are automatically aligned by springs. Kinetic and dynamic unbalance are determined electronically, at mechanical resonance of rotor and vibratory system. Made by **Stewart-Warner Corp.**, Alemite Div., Dept. NED, 1826 Diversey Parkway, Chicago 14, Ill.

For more details circle NED-137 B8 on enclosed inquiry slip

OIL LEVEL INDICATOR
sight glass is easily installed

Readily installed in gear cases, reservoirs, or housings, this fluid level sight glass shows the presence of liquid through a transparent window. It screws into a properly tapped hole. A reflector assures visibility of fluid level, even in dark areas. Made by **Technical Development Co.**, 307 S. Chester Pike, Glenolden, Pa.

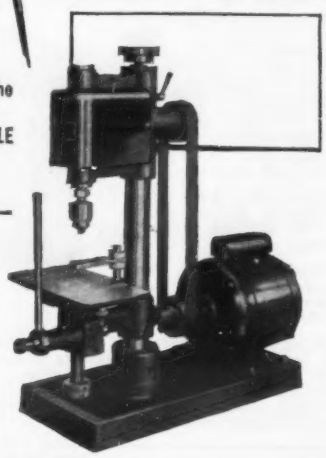
For more details circle NED-138 B8 on enclosed inquiry slip

COUNTING SCALE
accommodates loads to 1000 lb

Indicator of improved No. 1853 double-ratio platform counting scale magnifies beam movement nine times, instantly showing one item over or under the required quantity. Available in various ratios, the 1000-lb capacity scale can be used in predetermined or unknown quantity counting operations, or for straight weighing. Equipped with an overhead Detecto-Gram attachment, the scale speeds counting operations in stock taking, checking merchandise, issuing parts, and filling orders. Made by **Detecto Scales, Inc.**, Dept. NED, 540 Park Ave., Brooklyn 5, N. Y.

For more details circle NED-139 B8 on enclosed inquiry slip

Now YOU CAN TAP PRECISION HOLES IN BRITTLE MATERIALS OR THIN SHEETS



Recent design change of the HAMILTON SUPER SENSITIVE, SMALL-HOLE PRECISION TAPPING MACHINE

Also extends capacity to:—
.034" x 120 minimum
1/4" x 24 maximum

YOU will want full information about this important development!

WE WILL FURNISH IT FREE

Ask for BULLETIN NO. 2464

ADDRESS
THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE
2464

For more details circle NED-141 B8 on enclosed inquiry slip

SEND FOR DETAILS ON...

Schrader® AIRLINES, FITTINGS AND FERRULES

Everything you need for planning, fitting and installing your own airline hookups

Make compressed air connections that are neat and efficient, to fit your exact needs. You can plan them and install them yourself. For instance: Use Schrader oil-resistant synthetic rubber hose, cut to your specs with the fittings you need. Or buy the hose and fittings separately to make any combination you want. Seal with safe, air-tight Schrader ferrules.

SEND FOR ALL THE TECHNICAL LITERATURE YOU NEED

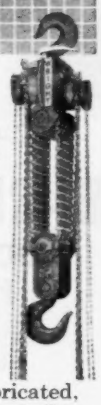
A. SCHRADER'S SON
Division of
Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue
Brooklyn 38, N.Y.

For more details circle NED-135 B8 on enclosed inquiry slip

WRIGHT SAFEWAYS
Your Best Buy for Rigging and Maintenance Work

12 Sizes
1/2-ton to 50 tons

Bulletin 412A gives complete details on the many outstanding features that make Wright Safeways your best buy for long, trouble-free life. Write York, Pa. for your copy.



Some Safeway Features

Load Chain is finest alloy, every foot proof-tested...heat treated for hard wear-resistant working surface...ductile to withstand shock loads..."wick" lubricated...anti-rust zinc coat.

Load and Idler Sheaves rotate on life-lubricated, antifriction bearings...minimum of 5 pockets in Big Sheaves for efficiency and long life.

Gears, Pinions, Drive Spindle (also top and bottom Hooks) are nickel-chrome-molybdenum alloy steel mounted on heavy-duty, antifriction bearings. *Gear Train* is enclosed in oil-tight chamber.

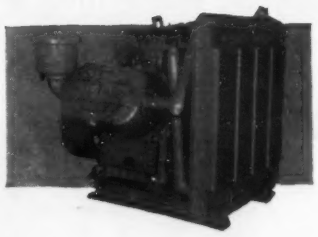
Load Brake is Weston type, silent, dependable.

Steel Housing fully protects vulnerable parts.

Wright Hoist Division
AMERICAN CHAIN & CABLE
ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

For more details circle NED-142 B8 on enclosed inquiry slip

SPACE-SAVING COMPRESSOR
Continuous air supply for limited floor space



This Gardner-Denver WB offers just what many plant planners want: a compact compressor package that tucks away in an unimportant nook and preserves precious floor space for productivity. The WB is available in eight sizes from 142 to 1150 cfm displacement. The largest WB model fits neatly into a space 72" long and 68" wide

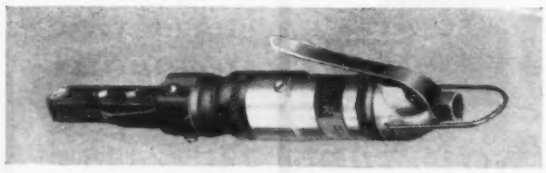
The water-cooled WB can be furnished with tube-type intercooler, or radiator-intercooler that saves on cooling water. The WB is easy to install . . . needs no special base. Just bolt down to floor, hook up and you have a steady, dependable source of air. Write for bulletin WB-10.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING
Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

For more details circle NED-136 B8 on enclosed inquiry slip

NEW RATCHET WRENCH
Air-powered for close-quarter nut running



This Keller 17A-2 ratchet can be used for the next-to-impossible nut running jobs. The flat driving end fits into spaces too small for other power tools—places usually inaccessible to anything but hand and open-end ratchets. The 17A-2 is available with a variety of attachments for a wide range of job applications: extra thin type, extended, angular, open-end, and many socket styles. Nuts can be either tightened or removed by simply turning the tool over.

The 17A-2 is available in two torque ranges: a slow-range tool that delivers high torque, and a high-range tool for fast run-downs where torque requirements are relatively low. Write for Bulletin 17-41.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING
Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ont.

GARDNER-DENVER

For more details circle NED-140 B8 on enclosed inquiry slip

NEW ANGLE DRILL
Handles variety of tight drilling jobs

This Keller 11G-2 air angle drill features interchangeable gears, spindles and chucks. Converts quickly to meet varying job requirements. Bevel gears have generated teeth and are mounted on roller bearings, with ball thrust bearings, to transmit power with maximum efficiency. Complete range of torque and speeds from 600 to 17,000 rpm. Capacity to 5/16".

Newly designed air intake and exhaust system improves power, motor efficiency, and muffles objectionable motor noise. Write for Bulletin 11-71.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING
Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Avenue, Toronto 16, Ontario

GARDNER-DENVER

For more details circle NED-143 B8 on enclosed inquiry slip

REVCO Sub-Zero Chests

- for shrink fits
- for seasoning gauges and tools
- for testing • for research
- for processing to –140°

Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to –30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to –95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to –85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as –140° F. 220V, 60 cycle, single phase.

Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers—no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range		Outside Dim.			Inside Dim.		
			Rm. 70°	Rm. 110°	L	W	H	L	W	H
Sub-Zero	SZH153	1.5	–95° F.	–85° F.	42"	28"	42¾"	23"	9"	12½"
Sub-Zero	SZH653	6.5	–85° F.	–75° F.	60"	28"	42¾"	47"	15"	16"
Sub-Zero	SZHC657	6.5	–140° F.	–125° F.	60"	28"	42¾"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	–30° F.	–20° F.	42"	28"	41"	30"	16"	18"

REVCO, Inc.
Setting Trends in Refrigeration since 1938 — Deerfield, Michigan

For more details circle NED-144 B8 on enclosed inquiry slip

For more details circle NED-145 B8 on enclosed inquiry slip

CUT HANDLING COSTS with HYTROL Conveyors

All-purpose Model "A" with aluminum bed, reversible, adjustable tension. 8 sizes, 6 to 20' length.

- * RUGGED
- * COMPACT
- * VERSATILE
- * JOB-ENGINEERED

- Horizontal and Inclined Models
- All-aluminum and All-steel Models
- Portable and Folding Models, Built-in Models
- Table-Top Models for Assembly Operations
- Powered, Reversible, Hydraulic Elevating
- Complete Optional Equipment and Attachments

Let us help you choose the conveyor or conveying system that fits your needs. Engineering assistance at no obligation. Write for catalog.

HYTROL Conveyor Co.
1965 S. 54th STREET • MILWAUKEE 14, WIS.

For more details circle NED-146 B8 on enclosed inquiry slip

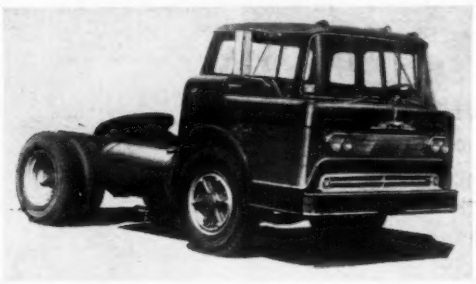
COUNTING CONTROLLER rate is up to 450 per minute

Applicable to many industries and machines, the Tally 1000 predetermined counter will count to preset totals from 1 to 1000 at rate of 450 per minute. Typical applications include packaging, batching, cutting of specific lengths, and controlling sequential operations. Unit can be used to control motors, heavy-duty solenoids, relays, conveyors, filling machines, printing presses, choppers, shears, valves, and markers. It operates electromagnetically on 115 or 230 v ac and consumes 25 w. Counter can be actuated by photoelectric control; Micro-Switch; impact, limit, or pressure switch; flow meter; or any single-pole single-throw switching device. Made by **Hobson Miller Machinery Corp.**, Dept. HM25, 280 Lafayette St., New York 12, N. Y.

For more details circle NED-147 B8 on enclosed inquiry slip

CAB-FORWARD TRUCKS have gasoline or diesel engines and air-controlled transmission

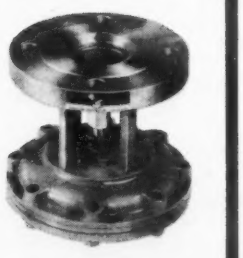
Light or heavy duty intercity or intracity hauling can be performed by the N-Group of cab-forward, four or six-wheel trucks or tractors, with gasoline or



diesel engines. Features include wide-angle, wrap-around windshield, wide doors, enclosed steps, and tilting cab operated by a spring balance arrangement.

Line includes the 40-Series with a maximum gross vehicle weight of 28,000 lb and gross combination weight on tractors of 40,000 to 53,000 lb; and the 60-Series, with maximum 30,000-lb weight and gross combination weight rating on tractors of 50,000 to 65,000 lb. Hydraulic power steering is optional, and brakes, clutch, and transmission are all air-controlled. Transmissions with 5, 10, 15, and 20 speeds, single or dual reduction rear axles, 150 and 185-hp gasoline engines, and 170 and 205-hp Thermodyne diesel engines are offered. Made by **Mack Trucks, Inc.**, 1355 W. Front St., Plainfield, N. J.

For more details circle NED-148 B8 on enclosed inquiry slip



CONOFLOW PRESSURE and LIQUID LEVEL TRANSMITTER

The Conoflow Model "P" Transmitter is a rugged instrument capable of measuring pressure or liquid level, and transmitting a *linear* 3-15 psi signal to a suitable recorder. No dip tubes, floats, or other mechanical devices are required inside the tank. Can be used for many services, on either open or closed vessels. Ideal for viscous fluids or materials which solidify in the static lines of pressure elements of conventional transmitters.

Available for measuring ranges from as low as 0 to 100" of water or pressures as high as 250 psi. Utilizes a corrosion-resistant Inconel X diaphragm suitable for temperatures to 450° F. Measured material cannot penetrate air lines. Safety shut-off feature available. Ranges easily changed in the field.

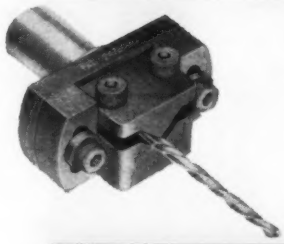
Conoflow Controls — FOREMOST IN FINAL CONTROL ELEMENTS

Write for Bulletin P-2520-3, today. CC714

CONOFLOW CORPORATION
SUBSIDIARY OF WALWORTH COMPANY
2100 ARCH STREET • PHILADELPHIA 3, PA.

For more details circle NED-149 B8 on enclosed inquiry slip

ACCURATE SET-UPS FAST!



Accurate, rapid set-ups the first time, every time . . . is the reason Brookfield Tool Holders are now widely used in practically every metalworking plant in the country. With one Brookfield Tool Holder, you can cut your stock of bushings by at least 100. Here's why:

BROOKFIELD TOOL HOLDERS

ADJUSTABLE V JAW holds wide range of tool diameters without bushings or accessories.

AXIALLY TRUE DESIGN makes perfect tool alignment almost automatic.

BALANCED-PRESSURE LOCKING ASSEMBLY maintains uniform seating, eliminates creep or shift.

EASY TO USE — just slip tool in the jaw, tighten, then float tool into dead center and lock.

AVAILABLE IN A WIDE RANGE OF SIZES

MODEL NO.	HOLDING RANGE	SHANK DIA.
BA-10	1/64"–5/16"	5/8"
DA-10	1/64"–1/2"	5/8"
DA-12	1/64"–1/2"	3/4"
GA-12	1/16"–3/4"	3/4"
GA-16	1/16"–3/4"	1"
KA-16	1/8"–1"	1"
KA-24	1/8"–1"	1½"
PA-24	1/4"–1½"	1½"
PA-28	1/4"–1½"	1¾"

WRITE FOR ILLUSTRATED CATALOG AND PRICES!

BROOKFIELD, INCORPORATED
STOUGHTON 114, MASSACHUSETTS

For more details circle NED-150 B8 on enclosed inquiry slip

PATENTS APPLIED FOR

1 TAYLOR* LIQUID SPRING REPLACES 20

Write for FREE Data Book

Specialists in compressible material devices

TAYLOR DEVICES, INC.
194 MAIN STREET, NORTH TONAWANDA, N. Y.

For more details circle NED-151 B8 on enclosed inquiry slip

Now...a fully-Armoured FLOW INDICATOR simple as...

For high pressures and hazardous fluids... No contact with glass

1 There's not a single stuffing box, yet this Model 3602 Armoured Flow Indicator handles pressures to 3000 psig; temperatures to 500° F. Eight ranges cover flows from 1.5 to 1200 GPH water. It's all metal with a positive-bond magnetic indicating follower . . . and only 7 inches high.

2 Disassembly is the simplest ever . . . without removal from the line. Head is rotatable.

3 Cleaning is a snap . . . so are range changes. Metering plug and interchangeable orifice simply lift out. Plug seat automatically checks back flow.

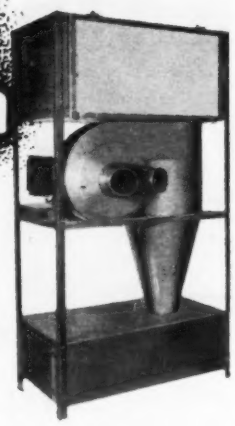
Send for Bulletin 360

BROOKS ROTAMETER COMPANY
258 D Street • Lansdale, Pa.

For more details circle NED-152 B8 on enclosed inquiry slip

EFFICIENT–LOW COST

Dust Collection



Easy installation . . . efficient low-cost operation . . . simplified maintenance, make Dustkop *FIRST* among equipment to collect most all industrial dusts. There are Dustkop models to eliminate your dust problems . . . that are space saving, self-contained units, or exhaust type for rafter, ceiling or outside location. Write for descriptive literature.

DUSTKOP STOPS DUST

37 STANDARD MODELS TO CHOOSE FROM

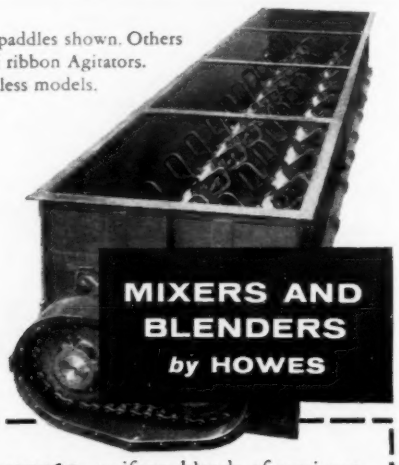
• READY TO USE

Also a Complete Line of Mist Collectors

AGET MANUFACTURING COMPANY
1396 E. CHURCH ST. • ADRIAN, MICHIGAN

For more details circle NED-153 B8 on enclosed inquiry slip

● New loop type paddles shown. Others with reverse-spiral ribbon Agitators. Also sanitary stainless models.



MIXERS AND BLENDERS *by* HOWES

For accurate, uniform blends of semi-wet or dry materials—for mixing dry with liquids—the Howes line offers cost-saving, exclusive features engineered for efficient, dependable operation.

Experienced assistance available to determine proper equipment for your needs. Write for literature or specialized information.

S. HOWES CO., INC.
Silver Creek, N. Y.
MANUFACTURING ENGINEERS

EUREKA Mixing, Sifting and Blending • Size Reduction • Screening • Weighing and Packing • Materials Handling • Cleaning and Grading **EQUIPMENT**

For more details circle NED-154 B8 on enclosed inquiry slip

SHARPEN YOUR OWN SAWS AND *Save!*

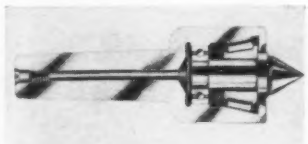
. . . simple to set up and use. The Oliver Ace grinds every angle of every tooth of your carbide and high speed saws—*fast!* The machine is designed to bring the wheel to the saw, providing a more accurate grind. It requires no computations and permits direct reading for clearance. Available in two models.

Also used for sharpening face mills, reamers, hobs, spot facers, straight and spiral cutters – and all general purpose tools. Write today.

OLIVER of ADRIAN
OLIVER INSTRUMENT COMPANY
1450 E. Maumee St. • Adrian, Michigan

For more details circle NED-155 B8 on enclosed inquiry slip

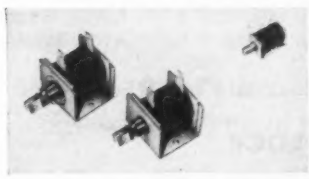
SELF-ADJUSTING LIVE CENTER
is concentric within 0.0001 in.



Extreme accuracy is built into this self-adjusting live center. The one-piece body serves as a cup for the roller bearing on which the spindle turns. Concentricity within 0.0001 in. is maintained throughout its life because of self-adjusting design. Made by **J & S Tool Co.,** Dept. 875, 87 Dorsa Ave., Livingston, N. J.

For more details circle NED-156 B8 on enclosed inquiry slip

SOLENOIDS
ac-dc and ac only models offered



Miniature Type C-5 solenoid (right) for alternating or direct current service measures $\frac{5}{8}$ x $\frac{3}{4}$ x $1\frac{1}{4}$ in. It incorporates a nylon plunger guide which minimizes wear and contributes to long life. Low cost Type C-8 solenoid (left) for appliance and vending machine uses is an alternating-current, push or pull type with spring return. Its size is $1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{3}{4}$ in. Samples of both models are available. Made by **Anderson Controls, Inc.,** 2779 Mannheim Rd., Des Plaines, Ill.

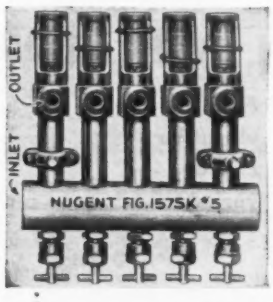
For more details circle NED-157 B8 on enclosed inquiry slip

ALPHANUMERIC PRINTER
prints output of digital devices at 1200 characters per second

An alphanumeric printer, the Magnityper, prints the output of such digital devices as computers and data handling equipment. It also converts to print data fed from magnetic tape handlers, perforated type handlers, punched cards, and communications circuits. Unit features an integral housing of mechanical printing assembly with the electronic storage and comparator systems, and solid state transistors and magnistors.

Magnityper has a 120-column storage system and is capable of printing 10 lines of 120 alphanumerical charters per second on multiple-copy, fanfold paper. Up to 63 different characters are available, including alphabetical, numerical, and special symbols in any combination. Vertical and horizontal format control is built in. Made by **Potter Instrument Co.,** Dept. NEM2, Sunnyside Blvd., Plainview, L. I., N. Y.

For more details circle NED-158 B8 on enclosed inquiry slip



NEW ...from NUGENT!

PRESSURE SIGHT FLOW LUBRICATORS

Assure positive lubrication in accurately measured quantities with the Nugent Pressure Sight Flow Lubricator. Available as single units or in multiples to 15. Simple adjustment of individual needle valve controls feed in amounts varying from several drops to 2 pints per minute.

Single lubricators available with ¼" or ⅜" ips inlet and outlet. Multiple unit inlet sizes to ¾" with ¼" or ⅜" outlets. Designed for 125 psi maximum working pressure. Write for full details.

ESTABLISHED 1897
WM. W. NUGENT & CO., INC.
3402 CLEVELAND STREET • SKOKIE, ILLINOIS

REPRESENTATIVES IN PRINCIPAL CITIES

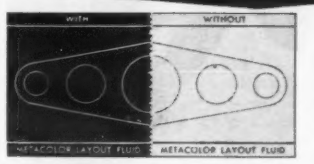
OIL FILTERS • STRAINERS • TELESCOPIC OILERS
OILING AND FILTERING SYSTEMS • OILING DEVICES
SIGHT FEED VALVES • FLOW INDICATORS

For more details circle NED-159 B8 on enclosed inquiry slip

A METAL DYE AND LAYOUT FLUID

DRIES INSTANTLY
NON-TOXIC
NON-EXPLOSIVE
QUICKLY REMOVABLE IN VAPOR DEGREASER

METACOLOR



Scribed lines stand out in sharp contrast on finished metal surfaces coated with METACOLOR. Dries to the touch in 15 seconds!

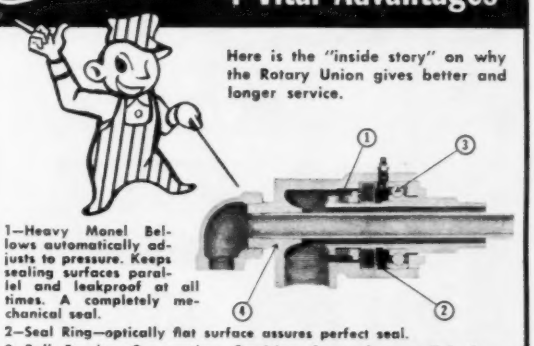
For Coloring Metal
Laying Out Dies
Templates
Patterns . . .
and for Color Coding by Brush Spray or Dip

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
58 COMMERCIAL STREET
ROCHESTER 14, N. Y.

For more details circle NED-160 B8 on enclosed inquiry slip

The ROTARY UNION'S* 4 Vital Advantages



Here is the "inside story" on why the Rotary Union gives better and longer service.

1—Heavy Monel Bellows automatically adjusts to pressure. Keeps sealing surfaces parallel and leakproof at all times. A completely mechanical seal.

2—Seal Ring—optically flat surface assures perfect seal.

3—Ball Bearing Construction. Precision, heavy-duty, radial thrust type. Minimizes friction and power consumption.

4—Unique Syphon Support prevents loosening, breaking, or falling off of syphon pipe.

The Rotary Union needs no mechanical maintenance or adjustments . . . a positive mechanical seal . . . minimizes downtime, labor, and replacements. Pipe Sizes ¼" through 3". For full information contact our nearest office or write for Bulletin 700D

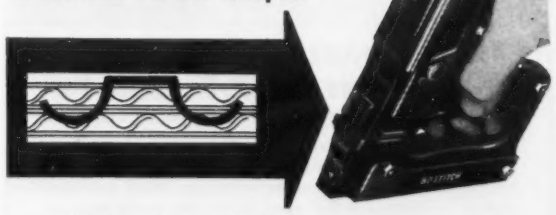
*Trade Name—Patented

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N. C.
Baltimore—Buffalo—Camden, N. J.—Chicago—Cleveland—Los Angeles
New York—Providence—Hamilton, Ont.—Montreal—Toronto

For more details circle NED-161 B8 on enclosed inquiry slip

A CLINCH WITHOUT A PINCH

Bostitch T5-OC stapler



Clinches staple entirely from surface of work

Fast and easy. No clincher blade to insert. Place it where you want a staple and press. Ideal for stapling shipping tags to corrugated containers, insulation around pipes and ducts, any stapling job where you can't get at both sides of the material.

Models for light and medium staples.

Look up "Bostitch" in your phone book, or write 682 Briggs Drive, East Greenwich, Rhode Island.

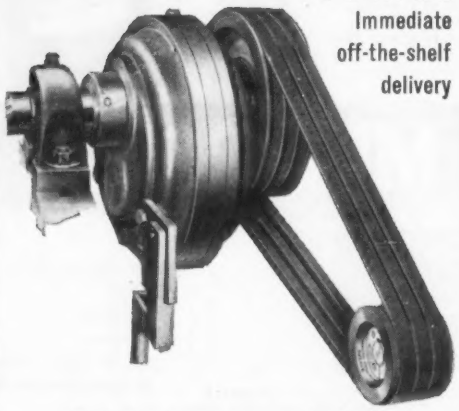
Fasten it better and faster with

BOSTITCH®
STAPLERS AND STAPLES

For more details circle NED-162 B8 on enclosed inquiry slip

AMERICAN SHAFT-KING SPEED REDUCERS

5 to 350 RPM
Immediate off-the-shelf delivery



- Exclusive torque-arm overload release
- Performance-proved in over 100,000 installations
- Exclusive taper-bushed mounting
- Write for catalog

The American Pulley Company
PHILADELPHIA 29, PENNSYLVANIA

▲ For more details circle NED-164 B8 on enclosed inquiry slip ▲

G. E. WARNER MANAGER
213B

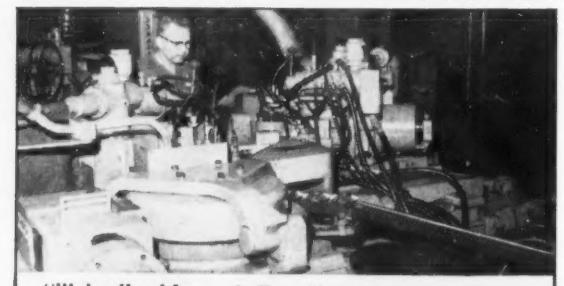
Engrave them ALL yourself on the portable Engravograph

It's tracer-guided for unskilled labor. Every plant needs one. From $290 up.

Write on your business letterhead for our 28-page, fully illustrated catalog No. NM-1.

new hermes ENGRAVING MACHINE CORP.
13-19 UNIVERSITY PLACE, NEW YORK 3, N. Y.

▲ For more details circle NED-165 B8 on enclosed inquiry slip ▲



"We've Used Aeroquip Hose Lines for over 4 years Never Had a Failure," Reports Maintenance Man

EATON MANUFACTURING CO., AXLE DIVISION, CLEVELAND

On automatic and semi-automatic machinery in Eaton's Cleveland axle plant, flexible hose lines are important hydraulic system components. Aeroquip Hose and Reusable Fittings were first used almost five years ago, on a small scale. They performed so well that Eaton maintenance men now systematically replace other hose and tubing with Aeroquip Hose Lines.

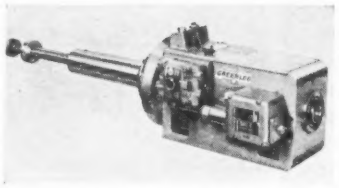
You can cut maintenance costs and add dependability to your equipment, too. Call the Aeroquip Distributor listed in your Yellow Page Phone Book, or write us.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN
INDUSTRIAL DIVISION, VAN WERT, OHIO • WESTERN DIVISION, BURBANK, CALIFORNIA • AEROQUIP (CANADA) LTD., TORONTO 19, ONTARIO
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

▲ For more details circle NED-166 B8 on enclosed inquiry slip ▲

BORING ATTACHMENT
mounts on fixtures or assembly jigs



Precision boring of large assemblies or small individual pieces are handled with equal facility by this Model S-7 Hydro - Borer. Designed for mounting on work-holding fixtures or large assembly jigs, this boring head consists of a cylinder housing, oil reservoir, bearings, boring spindle assembly, control valve, and spindle drive assembly. Manual, solenoid, or air-operated controls can be used. Spindle diameter is 1¾ in. with a No. 3 Morse taper. It has a 6-in. stroke, 0.0035 to 0.002 in. per revolution feed, and speed ranges of 465, 900, and 1400 rpm. Made by **Greenlee Bros. & Co.**, 2241 Mason Ave., Rockford, Ill.

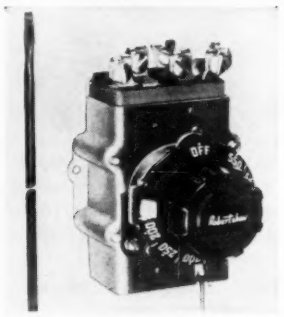
▲ For more details circle NED-167 B8 on enclosed inquiry slip ▲

TELEPHONE DIAL LOCK
prevents unauthorized use

Easily attached or removed from any dial telephone, this Loc-Ur-Phone dial lock prevents unauthorized use of the phone for outgoing calls, yet it does not interfere with incoming calls. There are a number of key changes for maximum protection. Device cannot be removed from phone without use of the key. Price is $1. Sold by **Cel-U-Dex Corp.**, Box 1127-A, New Windsor, Newburgh, N. Y.

▲ For more details circle NED-168 B8 on enclosed inquiry slip ▲

ELECTRIC THERMOSTAT
UL-approved unit for up to 700° F



Model D33 electric thermostat is designed to control three separate heating phases, one of which is continuously on when the dial is moved from the "off" position. The two other phases are controlled thermostatically and cycle automatically with changes in temperature. Unit has UL approval for 20-amp, 250-v ac loads. Nine different temperature ranges up to 700° F and a variety of dial markings are available. The steel encased unit has silver contacts and bridges, hardened steel levers and supports, and a heat-resistant plastic knob. Made by **Robertshaw-Fulton Controls Co.**, Robertshaw Thermostat Div., Youngwood, Pa.

▲ For more details circle NED-169 B8 on enclosed inquiry slip ▲

ELECTRIC BIN VIBRATOR

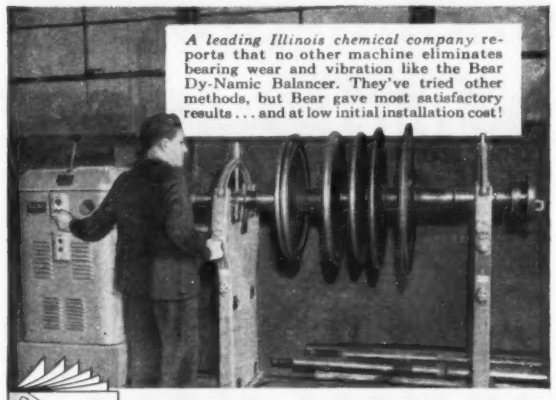
Force of vibration can be varied

Silent operation characterizes this new motor-driven adjustable eccentric vibrator in which eccentric weights are mounted at the two ends. The weights can be closed into a semi-circle for maximum force or opened into a three-quarter circle for minimum vibration. They are held together with a bolt.

Type RC-10, smallest in the line, provides six settings ranging from 140 to 550 lbs. of equivalent impact. Type RC-30 has seven settings from 385 to 1,110 lbs., and Type RC-50 provides a range of 750 to 2,250 lbs., also in seven settings. The eccentrics are protected beneath end covers after they have been set for desired action.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue - Cleveland 10, Ohio

▲ For more details circle NED-170 B8 on enclosed inquiry slip ▲



FREE CATALOG
tells how
DY-NAMIC BALANCING Cuts Maintenance Costs!

How to balance rotating parts from 4 oz. to 8 tons.
How to balance statically and Dy-Namically in one operation.
How others are cutting maintenance costs with Dy-Namic Balancing.
Specs and engineering data about complete line of Bear Dy-Namic Balancing Machines.

This Bear Catalog describes the Bear Dy-Namic Balancing Machines, which are used for maintenance work, to eliminate costly down-time for repairs, prolong machinery life and reduce mechanical failures. For your FREE copy, write Bear Mfg. Co., Dept. N-5, Rock Island, Ill.

1010

BEAR
STATIC AND DY-NAMIC BALANCING MACHINES

▲ For more details circle NED-171 B8 on enclosed inquiry slip ▲

JELLIFF *in Mesh with Industry . . .*

Wire Mesh

Specializing in the non-ferrous metals in counts to 200 x 200 or 50 x 750 and widths up to 48" in all commercial weaves

. . . FOR 76 YEARS

address your enquiries to Department 11

THE C.O. JELLIFF MANUFACTURING CORP.
Southport • Connecticut • USA

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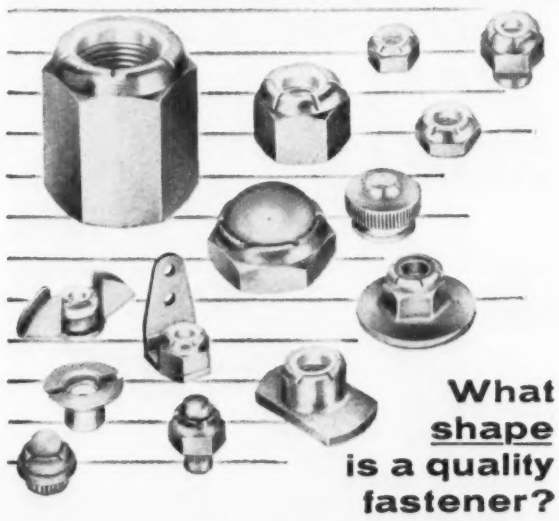


What shape is a quality fastener?

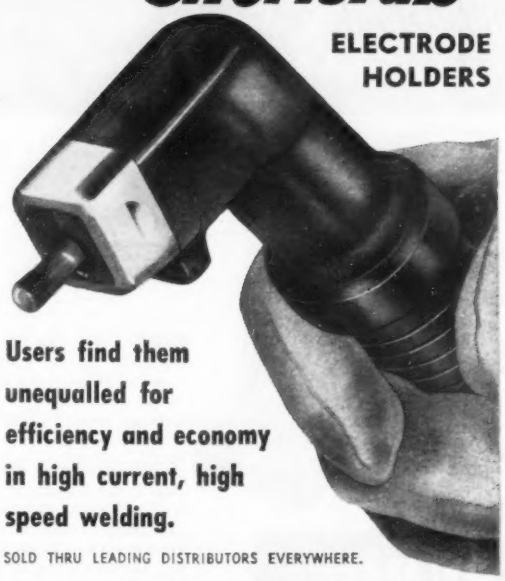
Here is a handful of ELASTIC STOP® nuts. Each has ESNA's familiar red locking collar*. . . is vibration-proof and made of the finest materials. Each is exactly controlled as to finished dimensions, class of thread fit and finish . . . with an unmatched record for uniformly high quality. **Most of them are standard parts** . . . some originated as a result of a specific request for ESNA's assistance. So . . . for help on *your* next fastening problem, send us the details of your application. Write Dept. S1-237.

**The red locking collar is a Registered Trade Mark of ESNA.*

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

▲ For more details circle NED-173 B8 on enclosed inquiry slip ▲

BERNARD "Shortstub" ELECTRODE HOLDERS



Users find them unequalled for efficiency and economy in high current, high speed welding.

SOLD THRU LEADING DISTRIBUTORS EVERYWHERE.

BERNARD WELDING EQUIPMENT COMPANY
10228 AVENUE N, CHICAGO 17, ILLINOIS

For more details circle NED-174 B8 on enclosed inquiry slip

Guaranteed GREATER ACCURACY than any other Variable Speed Drive

ONLY Graham most reliable variable speed drive made offers these BIG FOUR FEATURES!

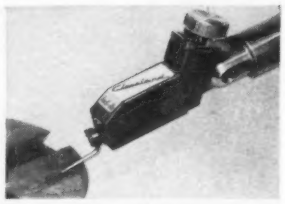
1. UNLIMITED SPEED RANGE — from any desired maximum speed to zero, including reverse, without stopping motor.
2. UNMATCHED ACCURACY — of speed setting and resetting, and speed holding.
3. ULTIMATE in SIMPLICITY and COMPACTNESS — a straight line extension of a standard induction motor — or available without motor.
4. AUTOMATED SPEED CONTROL — control tension, proportion, synchronization, etc. from any control signal; 3 to 15 PSI, .5 to 5 ma, potentiometer, frequency, or binary signal from punch cards, tapes, or computers.

SEE OUR CATALOG IN SWEET'S PRODUCT DESIGN FILE OR WRITE FOR COPY

GRAHAM TRANSMISSIONS, INC.
DEPT. NED • MENOMONEE FALLS, WISCONSIN

For more details circle NED-175 B8 on enclosed inquiry slip

ELECTRONIC HEIGHT GAGE
protector tip withstands rough use



Protection against blows from all directions, even head-on is provided in Indi-Ac electronic height gages by new Protector Gage Tip. This tip will deflect under accidental blows without damage to the gaging element. Its use permits checking holes or other hard-to-reach areas with the height gage. The friction ball joint mounting will slip under any pressure greater than 10 to 12 oz, but the normal gaging pressure of less than ½ oz does not affect its position. Made by **Cleveland Instrument Co.**, 735-A Carnegie Ave., Cleveland 15, Ohio.

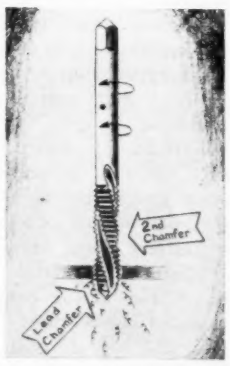
For more details circle NED-177 B8 on enclosed inquiry slip

SMALL TRENCHING MACHINE
digs 2 ft deep in widths to 6 in.

Fully mobile under its own power, this Model C Ditch Witch trencher will dig 3, 4½, or 6-in. wide trenches up to 2 ft deep at speeds to 4 fpm. Easily handled by one man, machine is powered by a 7-hp air cooled gasoline engine. It is particularly useful for installing underground wiring, sprinkler systems, water lines, communications systems, and signals. Price is $625. Made by **Charles Machine Works, Inc.**, Dept. NEDR, 668 Birch St., Perry, Okla.

For more details circle NED-178 B8 on enclosed inquiry slip

SPIRAL-POINTED TAP
has multiple chamfer sections



Lubricant is forced to the cutting edge of the Regal Jet continuous spiral - pointed tap, thereby extending its life and eliminating flute-clogging. Single or multiple chamfer sections present a new cutting section with proper chamfer and spiral point grind without the necessity for resharpening. Tap is available in machine screw Sizes 6, 8, and 10 for shallow hole threading, and in high speed steel with nitrite and chrome plating. Made by **Beloit Tool Corp.**, 12001 Milwaukee Rd., Beloit, Wis.

For more details circle NED-179 B8 on enclosed inquiry slip

"This $65 instrument saves me 60¢ an hour in production costs"

TIME RECORDER + TOTALIZER

what TRT is — An instrument that automatically records "on-off" time of **any machine or process.** Information is marked on a continuous, time-indexed tape. Marking stylus is electrically actuated. Tapes run 4 months.

what TRT does — Shows on tape **exactly when** "down-time" occurs, how long it lasts. Access window enables operator to write reason for stoppage. Visual counter totals **actual productive time.**

how TRT saves — TRT data-on-tape gives accurate, single-source basis for **cost-cutting** in plant or office: time study, production control, preventive maintenance, locating bottlenecks. Write for free Brochure T-10

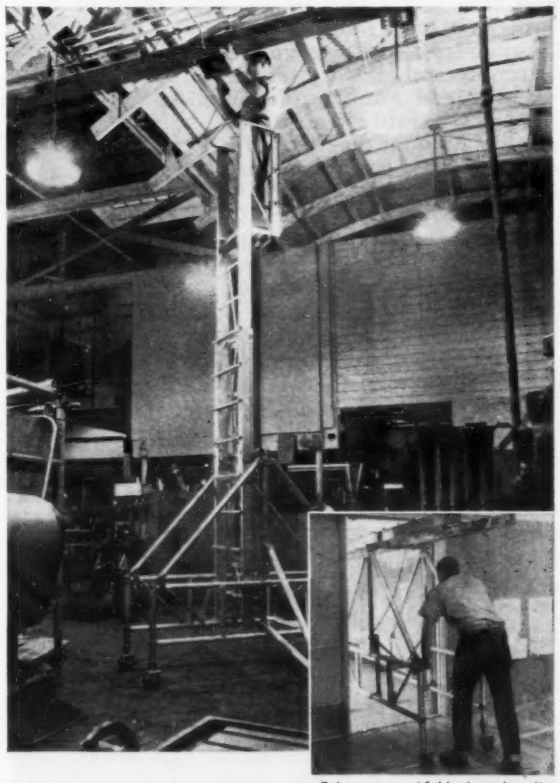
standard INSTRUMENT CORPORATION
657 BROADWAY, NEW YORK 12, N. Y.

For more details circle NED-180 B8 on enclosed inquiry slip

UP-RIGHT ANNOUNCES A NEW WORK PLATFORM

TALLESCOPE

...telescoping aluminum structure for overhead spot maintenance



Telescopes and folds down to roll through doorways, under trusses, pipes and conveyors.

Separates easily into 3 components for convenient storage or transportation.

Lightweight, rapidly assembled by one man. Extends instantly for reaching heights up to 30 ft. Adjustable legs for uneven floors or stairways. Only 29" wide for rolling through congested areas.

FOR TALLESCOPE CIRCULAR WRITE TO

UPRIGHT-SCAFFOLDS
DEPT. 175 • 1013 PARDEE ST., BERKELEY, CALIF.

Manufactured by UP-RIGHT SCAFFOLDS

For more details circle NED-181 B8 on enclosed inquiry slip

37 STAINLESS AND SUPER ALLOY ANSWERS TO CORROSION PROBLEMS IN TUBING AND PIPE

Standard Stainless Types

302	310	321
304	316	347
304L	316Cb	348
309S	316L	430
309Cb	317	442
309SCb	317L	443

Super Corrosion-Resistant Types

Carpenter Stainless No. 20Cb
Carpenter 7Mo
Carpenter Alloy B
Carpenter Alloy C
Titanium 55 and 70

Special-Purpose Types

Zirconium	Types 201 and 202
Zircalloy	Armco 17-7PH
19-9 DL	Titanium Alloys
HiMu 80	Haynes No. 25 (L-605)
N-155	Hastelloys F and X
Invar	A-286

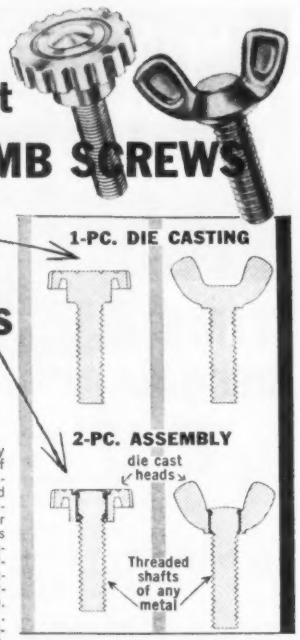
Draw on this wide selection of Carpenter stainless, super-resistant, and special-purpose Tubing and Pipe for *service-proved, cost-saving* solutions to all corrosion problems in your plant or products you make. Carpenter quality and uniformity save time and money. Round and special shapes for pressure, mechanical, structural, sanitary, and other needs. Tubing sizes to 4½" O.D., 35 to 9 BWG, in wide variety of surface finishes. Schedules 5 and 10 pipe to 4", Schedule 40 to 2". Prompt service and technical help from distributors in over 40 cities. Request *Selecting and Buying Guide* Bulletin T.D. 120.

MEMBER The Carpenter Steel Company
Alloy Tube Division, Union, N. J.
Export Dept.: The Carpenter Steel Co., Port Washington, N. Y.—"CARSTEELCO"

Carpenter
Stainless Tubing & Pipe

For more details circle NED-176 B8 on enclosed inquiry slip

GRC die cast WING & THUMB SCREWS



4 types to meet ALL needs

GRC offers you quality, quantity and economy PLUS your choice of two basic styles—one-piece zinc alloy die cast fasteners or assembled zinc alloy blanks with screw material of steel, brass, aluminum or other metals to order. Wing Screws have special patented recessed fingergrip, generous washer-type shoulder . . . Thumb Screws have exclusive wide top for firm, comfortable grip—plain or shoulder type. All have clean accurate threads . . . rustproof, non-corrosive, bright finish. Select from huge catalog stock of threads, styles and lengths. Another example of GRC's wide variety of fasteners—wing nuts, cap nuts, thumb nuts, rivets, etc.—die cast in quantity for greater economy!

Write for prices and bulletin TODAY

World's Foremost Producer of Small Die Castings

GRIES

GRIES REPRODUCER CORP.
143 Beechwood Ave., New Rochelle, New York, NEw Rochelle 3-8600

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toughest scoops and shovels made

WOOD'S Moly BRAND

Mo-lyb-den-um alloy blades

Pat. Steel I-Beam Prevents Handle Breakage

Workers like them for hang, balance, and perfect finish . . . and they last 2 to 3 times as long as other grades. Blades guaranteed uniform gauge, hardness, and tensile strength. Guaranteed not to split or crack. Guaranteed uniform quality 12 to the dozen. Cheapest shovels you can buy for long hard service, and workers take care of tools they like.

THE WOOD SHOVEL & TOOL CO.
Piqua, Ohio

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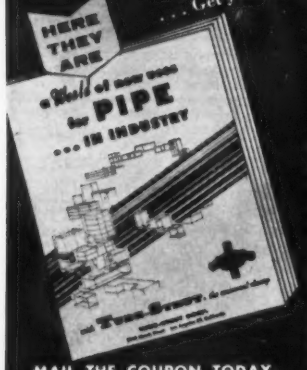
a World of new uses for PIPE IN INDUSTRY

. . . Get your free copy



NEW WAYS TO *Save* TIME . . . *Lots of time* MONEY MATERIAL

Now ordinary pipe can serve industry in unlimited new applications that will save you much time, money and materials. Production fixtures can be made fast with ordinary pipe. No welding, special materials or special tools. This big free book tells you how. Mail the coupon below for your free copy today.

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2960 Marsh Street
Los Angeles 39, Calif.

Rush your new book "New Uses for Pipe" to—

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Firm _____
Address _____
City _____ State _____ NED-A2

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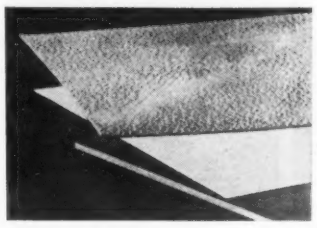
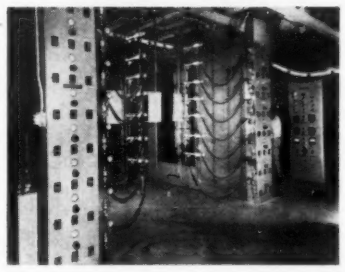
RUBBER-RESIN FILM ADHESIVE bonds metals, plastics, honeycombs



Developed for bonding of flat metal sheets, flexible plastic films to rigid and semi-rigid metals and plastics, and metal and plastic skins to honeycomb cores, Plymaster V-3 is a low-cost, 4-mil thick, 100 per cent reactive, synthetic rubber-resin film adhesive. A high strength, porous paper acts as the carrier for the latent adhesive. Prices range as low as 70 cents per sq yd in production quantities. Being solvent-free, it assures clean bonding, uniform adhesion, elimination of fire hazard or odor, and ease of application. It will join most metals and foils, rigid plastics, plastic films, hardboard, leather, fabrics and other materials to themselves or to each other. Adhesive is supplied in 36-in. wide 100-yd and longer rolls with a protective interliner. Four alternative methods can be used to reactivate the dry film. Made by **Rubber & Asbestos Corp.**, Dept. P, 225 Belleville Ave., Bloomfield, N. J.

▲ For more details circle NED-185 B8 on enclosed inquiry slip ▲

ELECTROSTATIC PAINT SPRAYERS packaged units are sold outright for spraying a variety of products



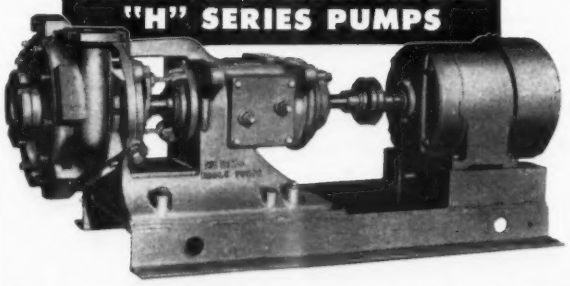
Minimum of special engineering is required to set up and use one of six standard electrostatic paint spray systems, sold outright as packaged units. Systems are offered with spray booths, spray guns, electrodes, power rotators, pressure control panels, electrical control panels, and high voltage transformers. Water-wash booths are furnished for heavy production and dry type booths for light production. Both types conform to UL requirements.

Spray guns and electrodes are suspended from an overhead trolley. Guns may be adjusted forward, backward, up, down, and tipped to any angle. They turn on and off automatically to avoid spraying at open spaces between products. Power rotators are installed where products must be rotated to receive a uniform paint film.

Electrical controls interlock spray guns with exhaust fan motor control and parts conveyor. The transformer-rectifier operates on a 110-v, single-phase line and has a total load under 1000 w. Made by **H. G. Fischer & Co.**, 9455 W. Belmont Ave., Franklin Park, Ill.

▲ For more details circle NED-186 B8 on enclosed inquiry slip ▲

"INTESTINAL FORTITUDE" BUILT INTO NEW NAGLE "H" SERIES PUMPS



The new "H" Series of Nagle Pumps, designed exclusively for the abusive pumping jobs of industry, is simplicity itself. Three types of water ends available to meet specific conditions, type "HF", "HC" and "HR" (shown). Various alloys used for water-end members depending upon corrosive, abrasive or high temperature conditions involved. Water-end can be rotated to any one of four discharge positions. Slippage seal adjustment takes only moments using a common wrench. Packing gland is readily accessible. Radial adjustment of shaft to insure concentricity through stuffing box is a matter of seconds. Various types of impellers available. Impellers readily accessible. Oil or grease lubrication is optional. Sizes from 1" to 10". Heads up to 250' or more. Capacities to 4,000 G.P.M. A "must" for those tough applications where ordinary pumps fail. Send for Bulletin "H"

NAGLE PUMPS

NAGLE PUMPS, INC.
1265 CENTER AVE., CHICAGO HEIGHTS, ILL.

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

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SEALMASTER BALL BEARING UNITS

for Quality, Service, Delivery and Complete Line!

SEALMASTER Ball Bearing Units contain a combination of patented features, you will find in bearing units of no other make. These features have been responsible for SEALMASTER'S leadership in the mounted bearing unit field. They are important to you in the equipment you build, buy or operate. Insist on SEALMASTER!

Write for Bulletin 454 Today.

SEALMASTER BALL BEARING UNITS

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

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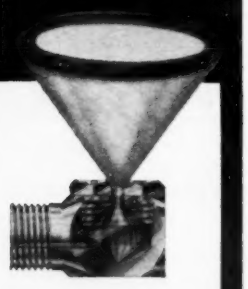
Spray Nozzles

A Complete Selection for INDUSTRIAL APPLICATIONS

Whether you need hard-hitting sprays for cleaning or degreasing applications or soft, misting sprays for wetting or dust settling, Delavan nozzles will improve your spraying process. Write today for catalog #33 and price index D-33A for complete details on Delavan spray nozzles.

Catalog 33 — twenty-eight pages of nozzles, rating tables and application data to help you.



Type WR Hollow cone nozzle

DELAVAN Manufacturing Company
WEST DES MOINES, IOWA

▲ For more details circle NED-189 B8 on enclosed inquiry slip ▲

FLOW METERS

FLOW INDICATORS

ROTAMETERS (for measuring fluid rate of flow): General Purpose, Glass Tube; Armored; Bypass and "T" types for large flows; Transmitting for remote indicating, recording, or controlling rate of flow; Laboratory; Chemical; Alarm; and Purge.

FLOW INDICATORS (for visual observation of fluid flow): Flapper; Rotary; and Ball Flow.

BULLETIN M-1 pictures and describes SK's line of Rotameters and Flow Indicators. Copies are available on request.

Schutte and Koerting COMPANY
INSTRUMENT DIVISION
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

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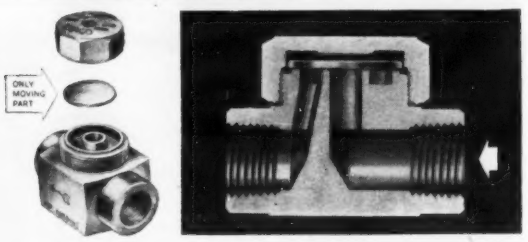

SIMPLEST STEAM TRAP

Trouble-free design practically eliminates maintenance

1. *No complicated mechanism!* Look at the cross-section above. Not a pin, lever, gasket or bucket in sight! There aren't any . . . in the practically trouble-proof Sarco TD . . . simplest of all steam traps.

2. The kinetic energy of steam closes the valve. No mechanism needed.

3. Only 3 simple, rugged parts (not assemblies) . . . made of stainless steel. Only 1 moving part.

4. No narrow channels to choke. No gaskets to leak.

Ask for 60-day trial

We'll send you Sarco TD steam trap, strainer. No cost or obligation. Buy *only* if completely satisfied. Advise size—3/8, 1/2, 3/4 or 1"—and use. Sarco Co., Inc., 635 Madison Ave., New York 22, N. Y.

2242-F

SARCO Thermo-Dynamic STEAM TRAP

THE MODERN TRAP THAT IS MAKING STEAM TRAPPING HISTORY!

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MOST IMPORTANT IN CYLINDERS

DELIVERY ★ 24 HOURS

AND

DESIGN

Rugged, Leakproof, and 40% Savings in Space

Send For Complete Catalog File

All essential ordering details and specifications on the Carter line of cylinders and valves.

CARTER CYLINDERS

PHONE: BAyport 1-7186 (Chicago)

CARTER CONTROLS INCORPORATED
2876 Bernice Road, Lansing, Illinois (Chicago Suburb)

AIR CYLINDERS • HYDRAULIC CYLINDERS • AIR VALVES
ROTARY ACTUATORS • SPECIAL CONTROLS

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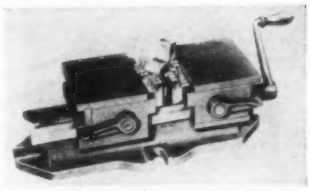
MULTIFINGERED VISE
grips irregularly shaped pieces



Positive holding of any irregular shaped piece is provided by the Ampogrip multifingered vise. Its fingers automatically adapt its grip to fit the piece to be held. Vise was formerly made by American Positive Grip Vise Corp. and is now made and marketed by **E. W. Bliss Co.**, Die Supply Div., 1400 Brookpark Rd., Cleveland 9, Ohio.

▲ For more details circle NED-194 B8 on enclosed inquiry slip ▲

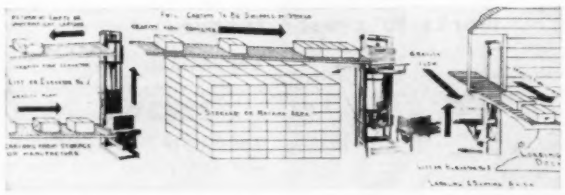
OZONE-RESISTANT RUBBER
also resists oil and abrasion

Compounds of Hycar 1072 nitrile rubber resist ozone cracking, even when they are soaked in hot oil prior to exposure. Material also has good oil, abrasion, and oxidation resistance; good flexibility; and high strength. It is suited for electrical insulation near ozone-producing spark discharges, and as fabric coatings for indoor and outdoor use. Rubber also withstands attack by atmospheric ozone in parts which are under stress. Made by **B. F. Goodrich Chemical Co.**, Advertising Dept., 3135 Euclid Ave., Cleveland 15, Ohio.

▲ For more details circle NED-195 B8 on enclosed inquiry slip ▲

CONVEYOR-LIFT ELEVATORS
for production-to-shipping handling between floors, levels on one floor

Automatic handling through production, packaging, banding, labeling, and loading to the shipping platform is provided by Weld-Bilt conveyor-lift elevator

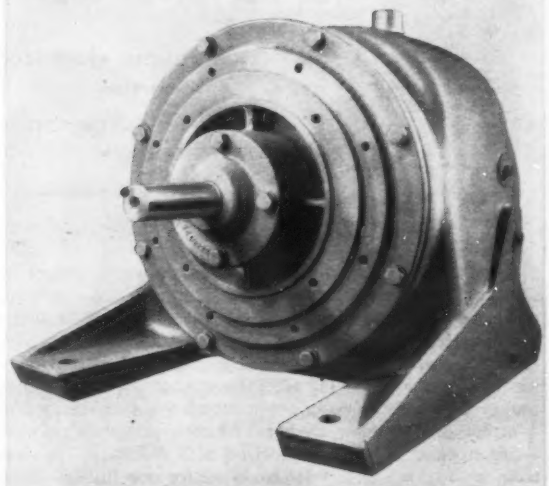


systems. They are used with gravity and power conveyors to take packages from one level and lift them to higher or lower level for continuous movement. Systems can be designed for quality control, automatic selection, and rejection by weight and size. Delivery can be in any direction.

Illustrated unit receives loads at one side at the bottom and discharges on the opposite side at top level. Movement on and off the platform is by gravity. Box trips switches to raise and lower the platform. Operation is continuous as long as boxes are waiting to be moved. Use can be between two or more floors, or between levels on a single floor. Made by **West Bend Equipment Corp.**, 329 Water St West Bend, Wis.

▲ For more details circle NED-196 B8 on enclosed inquiry slip ▲

MODULINE GEAR UNITS



EXCLUSIVE DEVELOPMENT OF WESTINGHOUSE ELECTRIC CORPORATION

ORIGINAL in . . . SIMPLICITY

Internal shafts are splined and threaded to simplify gear and pinion mounting. Only a wrench is needed to disassemble and replace or modify components. Awkward gear pullers and fittings are eliminated. Only seven Moduline unit sizes assemble into over 20,000 different gearmotors and speed reducers.

VERSATILITY

Moduline gearmotors, speed reducers and package motor reducer drives will handle any job from 1 to 75 hp, 1.9 to 420 rpm. Concentric shaft and right angle units for floor, wall, ceiling or angle mounting are built by selecting the proper modules to meet customer drive requirements. Modifications or drive changes can be made on the job.

DEPENDABILITY

Strong, spin-flame, heat-treated alloy steel gears and proportioned shafts, bearings and structural parts make Moduline units outstanding. Gear teeth are ground so accurately that they meet AGMA standards for master gears. The precision construction and high load-carrying capacity of Moduline units mean years of quiet, trouble-free performance.

J-07366

This free booklet describes Moduline . . . a complete line of speed reducers . . . gearmotors . . . and package motor reducer drives. For your copy write: Westinghouse Electric Corporation, Gearing Division, 200 McCandless Avenue, Pittsburgh 1, Penna.

YOU CAN BE SURE...IF IT'S **Westinghouse**

▲ For more details circle NED-197 B8 on enclosed inquiry slip ▲

NEW YALE TRIPLEX MAST

features high lift, low-headroom clearance

for fast, continuous handling operations

216"-HIGH REACH. New Yale Triplex Masts stack high, make full use of air rights, increase storage capacity of present warehouse facilities. New interlocking I-beam construction provides maximum load stability. New open-front design gives driver full forward visibility.

96"-LOW SILHOUETTE. With mast down, same truck operates safely in any low-headroom area...moves right into boxcars to speed shipments. You get a smooth, continuous handling operation that eliminates rehandling, saves time.

Max. Fork Lift	108"	126"	144"	162"	180"	201"	216"
Collapsed Overall Height	59"	65"	71"	77"	83"	90"	96"

Capacities: 3,000, 4,000 and 5,000 lbs. For full facts, write The Yale & Towne Mfg. Co., Philadelphia 15, Pa. Dept. A-372

YALE* **INDUSTRIAL LIFT TRUCKS AND HOISTS**

*REG. U. S. PAT. OFF.

Gasoline, Electric, Diesel & LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Hand and Electric Hoists

▲ For more details circle NED-193 B8 on enclosed inquiry slip ▲

Now available— SEL-LOK spring pins in beryllium copper

- Superior electrical properties
- Excellent corrosion resistance
- Fast, economical fastening

SEL-LOK spring pins made of beryllium copper give you the speed and economy of self-locking fastening, plus outstanding electrical characteristics. They have high conductivity, are nonsparking and nonmagnetic. In addition, they offer superior corrosion resistance. These properties are combined in a material having 60% the strength of carbon steel, more than ample for most applications. SEL-LOK spring pins —in beryllium copper, carbon and corrosion-resistant steel —are stocked by your authorized SPS distributor in sizes from 1/16 x 3/16 to ¼ x 3½ in. Write for new Bulletin 2331. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

SPS Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co., Inc. • Nutt-Shel Corporation • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

For more details circle NED-200 B8 on enclosed inquiry slip

MAKE AERIAL FORK LIFTS

out of Your Cranes and Hoists

WITH CADY PALLET LIFTERS . . .

Illustration shows how you can now make your cranes and hoists handle pallet loads, containers, skids, coils, sheets, concrete pipe and other unit loads quickly, easily, and at low cost with Cady Lifters.

At 1/10th the Cost

Make your cranes and hoists function as fork lifts at 1/10th the price of fork trucks! They speed up loading and unloading trucks, gondolas and ships, plus hundreds of savings in plants, warehouses, loading docks, bays, and storage areas where truck aisles do not exist.

Alloy steel, welded box section, no moving parts. Capacities from 1 ton up and custom models to suit your special load.

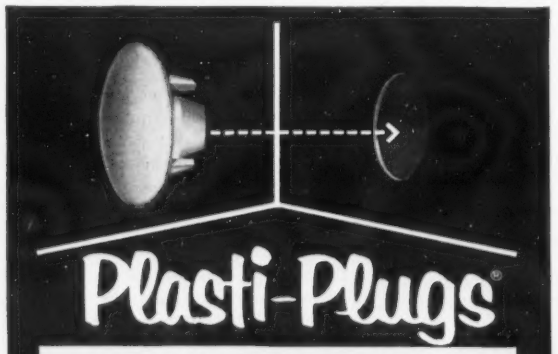
REPEAT ORDERS PROVE SATISFACTION

Used by the Who's Who of Industry throughout United States and Canada. Phone JAckson 4145 for full information, Application Guide, and name of local distributor.

CADY METAL FABRICATING, INC.

84 Schenck Street • N. Tonawanda, N. Y.

For more details circle NED-201 B8 on enclosed inquiry slip



Plasti-Plugs®

45 STANDARD SIZES

FASTEX Plasti-Plugs® snap-in type plastic plugs— are available for a wide range of applications, including:

- Ventilation Holes
- Access Holes
- Sealing Plugs
- Frictionless Glides
- Indicator Buttons
- Appliance Feet
- Spacer Buttons
- Conduit Holes

Available in several plastic materials, Plasti-Plugs can be color-matched to your product saving expensive rack painting, and they just snap in.

Write for FREE Plasti-Plug Folder.

* TRADE MARK

FASTEX

195 Algonquin Road, Des Plaines, Illinois

FASTEX SHAKEPROOF Divisions of Illinois Tool Works

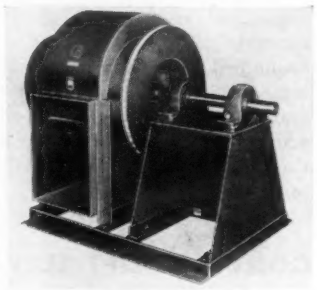
For more details circle NED-202 B8 on enclosed inquiry slip

DRAFTING PEN POINTS
plastic nibs hold steel points

Threaded, interchangeable nibs of molded Tenite butyrate plastic hold steel drafting pen points and screw into Di Carlo pen holders. Any point in the set can be changed in 2 sec or less, without jamming or soiling of fingers. Nibs are made in bright colors, and the firmly-anchored points will not loosen. Price of complete set is approximately $7. Made by **Di Carlo Pen Co.**, 3 Station Rd., Madison, N. J.

For more details circle NED-203 B8 on enclosed inquiry slip

HEAT FANS
capacities from 600 to 30,000 cfm



A rotating member of dissimilar alloy, fitted to the shaft, radiates and circulates ambient heat away from the bearing areas in Dura-Temp high temperature heat fans. Chance for bearing trouble is thus minimized. Line includes units with capacities from 600 to 30,000 cfm for handling air or gas at temperatures up to 1650° F. Made by **General Blower Co.**, Dept. H, 8611 Ferris Ave., Morton Grove, Ill.

For more details circle NED-204 B8 on enclosed inquiry slip

HAND SCREWDRIVER
works to preset torque

Applications requiring a specific torque are served by the Safe-Torque hand-operated screwdriver. The industrial tool has a roller drive clutch and is intended for use in the 0 to 25 lb-in. range on instrument, aircraft controls, appliances, and electronic equipment. When preset torque is reached further tightening is impossible. Torque under the factory-set maximum is selected with an adjusting screw. Operation can be in either direction. Driver is provided with a hex wrench for torque adjustment and one specified Apex bit. Various drive bits, shanks, and sockets for a variety of screws are offered. Made by **Scully-Jones & Co.**, 1916 S. Rockwell St., Chicago 8, Ill.

For more details circle NED-205 B8 on enclosed inquiry slip

SCHERR PRECISION MEASURING TOOLS

NON-ROTATING SPINDLE BLADE TYPE MICROMETER HEAD

to be built into fixtures, machine tools, delicate instruments and cross-slides.

NON-ROTATING SPINDLE BLADE TYPE MICROMETERS

For Measuring of narrow depth grooves, slots, keyways, splines, square threads, recesses and similar hard-to-measure surfaces.

BLADE THICKNESS .030" GAGING DEPTHS TO ¼"

Available Carbide-tipped

Spindle and Anvil Blades are hardened, ground and lapped to contact fit

Graduated in .001"
Ranges: 0-1", 1-2", 1½-2½", 2½-3½" 3½-4½" and others

Mandrel Type MICROMETER Sets

with TUBULAR Frame for • EXTRA STRENGTH • LIGHT WEIGHT

Each Set has a range of 6" and is equipped with setting Standards & mandrels in finished wooden case

Light Weight Frames For Extra Large Sizes

Available from 6" to 96"

Sold thru Tool Supply Houses WRITE FOR ILLUSTRATED FOLDER

GEO. SCHERR CO., INC.

200 ND LAFAYETTE ST. • NEW YORK 12, N. Y.

For more details circle NED-206 B8 on enclosed inquiry slip

MOSINEE . . . creators of specialized papers

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MOSINEE DATA FILE
on specialized papers

Mosinee Data File brings you up to date on *specially treated papers* that resist flame, fungi, rot, moisture and other biological and chemical conditions that cause loss of profits.

Mosinee Specialized Papers are widely used in packaging, and in electrical, construction, fabrication, insulation, agricultural and other industries.

Mosinee Data File contains useful technical data, samples of Mosinee Papers, application recommendations, etc. Send for your free copy.

MOSINEE PAPER MILLS COMPANY
MOSINEE, WISCONSIN

For more details circle NED-207 B8 on enclosed inquiry slip

born of years of intensive laboratory research...

... a startling NEW filter material

...A NEW FUME RESPIRATOR

Pulmosan

C-261
Single Cartridge Respirator

Approved for fumes and dusts

U. S. BUREAU OF MINES
Approval #2171

- Filter sealed in featherlight rugged aluminum cartridge
- Single unit protects against fumes from burning, smelting and welding of metals, dusts not significantly more toxic than lead
- Cartridge easily and inexpensively replaced
- Typical Pulmosan exclusives assure quality and efficiency
- First really new filter material in years

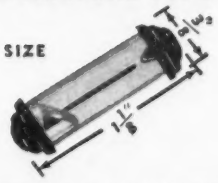
Pulmosan
SAFETY EQUIPMENT CORPORATION
644 Pacific Street, Brooklyn 17, N. Y., STerling 9-0200
1007 Washington Ave., St. Louis, Mo., CHestnut 1-9393

For more details circle NED-208 B8 on enclosed inquiry slip

NEW LOW COST

MERCURY SWITCH
MINIATURE TYPE

ACTUAL SIZE



HERMETICALLY SEALED

Introducing a new Mercoid hermetically sealed mercury switch—a tilting type switch designed to be installed in the same manner as a cartridge fuse (spring clips or holders can also be used for mounting purposes).

Operation is noiseless and contact position is readily visible.

Its small size and light weight make it particularly adaptable for such applications as business machines, coin operated machines, signals, sign flashers or refrigerator doors.

Electrical rating: SP-ST: 1.75 amp. 115 volts; 0.6 amp. 230 volts.

WRITE FOR BULLETIN 665

THE MERCOID CORPORATION
4209 Belmont Ave., Chicago 41, Ill.

For more details circle NED-209 B8 on enclosed inquiry slip

For maximum protection against leakage and corrosion . . .

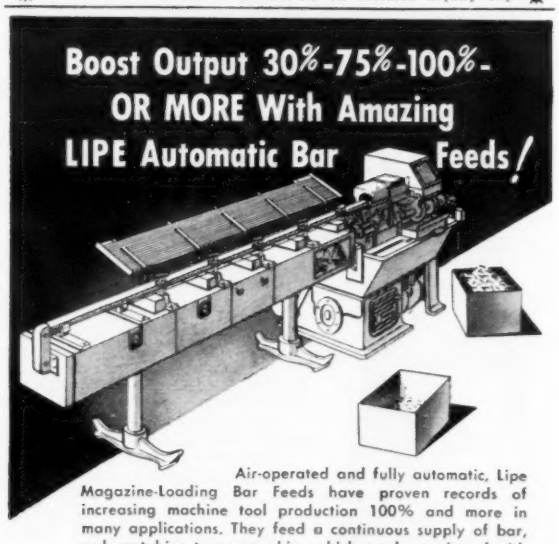
Bulletin No. 5004 outlines the superior chemical handling qualities of this "application engineered" transfer pump. Write for your free copy today.

OLIVITE T.M. REG. U.S. PAT. OFF.

DORR-OLIVER INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
STAMFORD • CONNECTICUT • U.S.A.

▲ For more details circle **NED-210 B8** on enclosed inquiry slip ▲

Boost Output 30%-75%-100%- OR MORE With Amazing LIPE Automatic Bar Feeds!



Air-operated and fully automatic, Lipe Magazine-Loading Bar Feeds have proven records of increasing machine tool production 100% and more in many applications. They feed a continuous supply of bar, rods or tubing to any machine which can be equipped with a feed-length stop. Ideal for screw machines, turret lathes, centerless grinders, punch presses, thread rollers, etc.

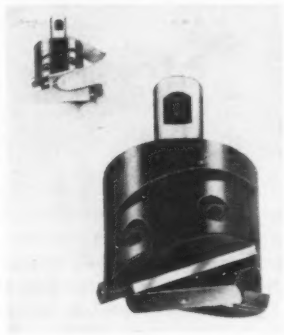
SEND TODAY for free folder and complete details on how Lipe Automatic Magazine-Loading Bar Feeds can boost your production and profits.

Lipe-ROLLWAY CORPORATION
SYRACUSE 1, N. Y.

Manufacturers of Automotive Clutches and Machine Tools

▲ For more details circle **NED-211 B8** on enclosed inquiry slip ▲

FACE MILL CUTTER
can take 2½-in. diameter cut



Made of heat treated SAE 4140 steel, this PDQ Manchester face mill is designed for heavy duty machining. Shearing action of the double inserts assures fast cutting and good finish. Carbide cutters are readily changed and reset with a gage which is furnished with tool. Inserts can be sharpened on off-hand grinders. Tools have ¾ or 1-in. diameter shanks. Made by **Portage Double Quick, Inc.,** 1043 Sweitzer Ave., Akron 11, Ohio.

▲ For more details circle **NED-213 B8** on enclosed inquiry slip ▲

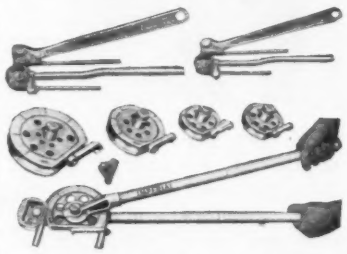
IMPACT WRENCH
heavy duty model is reversible

Tightening and removing bolts, nuts, and screws, as well as stud setting and tapping are uses for the Model A-30-SA reversible impact wrench. Improved heavy duty tool has more power than previous model, yet is compact and has fast run-down. A two-hammer impact mechanism offers good balance with a minimum of vibration. Tool has a ½-in. square shank or integral quick-change chuck and 3 and 6-in. spindle extensions, all with ⅜-in. bolt capacity and 5/16-in. tapping capacity. Accessories are available. Made by **Reed Roller Bit Co.,** Cleco Div., Dept. C, Box 2119, Houston 1, Tex.

▲ For more details circle **NED-214 B8** on enclosed inquiry slip ▲

TUBE BENDERS
handle hard or soft tubing

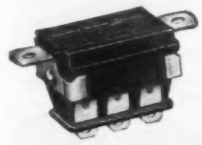
From two to seven sizes of hard or soft temper copper, aluminum, steel, or stainless steel tubing can be bent with improved Blue Dot combination lever-type benders. Tools make bends up to 180 degrees in ¼ to ⅞-in. OD tubing. Those designed for four or more sizes of tubing are furnished in metal kits. Various sizes of tubing are accommodated by changing the forming wheel and shoe. Made by **Imperial Brass Mfg. Co.,** Dept. HSF, 6300 W. Howard St., Chicago 31, Ill.



▲ For more details circle **NED-215 B8** on enclosed inquiry slip ▲

FOR PUBLIC ADDRESS, RADIO, and kindred fields, specify JONES 400 SERIES PLUGS AND SOCKETS of proven quality!

S-406-AB



P-406-CCT

Double Contact Area

Phosphor bronze knife-switch socket contacts engage both sides of flat plug contacts.

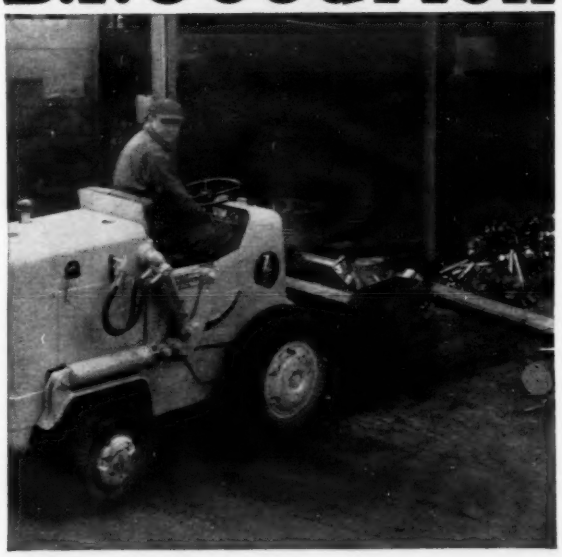
Socket contacts phosphor bronze, cadmium plated. Plug contacts hard brass, cadmium plated. Insulation molded bakelite. Plugs and sockets polarized. Steel caps with baked crackle enamel. 2, 4, 6, 8, 10, 12 contacts. Cap or panel mounting.

Information on complete line, in Jones Catalog 21: Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle **NED-216 B8** on enclosed inquiry slip ▲

B.F.Goodrich



New All-Purpose Pneumatic industrial tires cut your operating costs 4 ways!

THE first thing the driver of a materials handling truck notices when you change to B.F.Goodrich All-Purpose Pneumatic industrial tires is the smooth, comfortable ride—the sure, dependable traction! But *you'll* notice reduced operating costs because B.F.Goodrich All-Purpose tires:

1. Lower machine maintenance by protecting equipment.
2. Cut plant maintenance by protecting floors.
3. Reduce breakage by cushioning loads.
4. Mean more work per salary-dollar by reducing driver fatigue.

The All-Purpose tread has hundreds of gripping edges that give positive traction in forward or reverse—on all hauling surfaces, indoors and outside. Husky shoulders and a continuous center rib wear slowly and evenly, give the All-Purpose greater stability under heavy loads.

FREE TW Analysis cuts costs up to 50%

The new B.F.Goodrich All-Purpose Pneumatic is just one in the only complete line of money-saving industrial tires for every materials handling job. Picking the right tire for your work is the job of the B.F.Goodrich Tire and Wheel Analysis man. His unbiased recommendations can save you up to 50% on tire costs, up to 20% on maintenance costs. This B.F.Goodrich service is *free*—just mail the coupon. A consulting service is available to manufacturers of materials handling equipment.

Specify B.F.Goodrich tires when ordering new equipment

B.F.Goodrich FIRST IN RUBBER

B.F.Goodrich Tire Company
A Division of The B.F.Goodrich Company
Department TW-676, Akron 18, Ohio

I would like further information on your FREE TW Analysis.

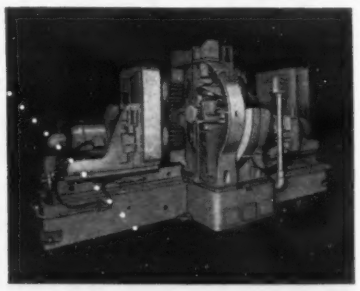
Name_____
Company_____
Street_____
City_____ Zone____ State____

▲ For more details circle **NED-217 B8** on enclosed inquiry slip ▲

dependable machine support . . . begins with an

EMPCO

leveling jack



Dependable, easy-to-adjust Empco Leveling Jacks provide a solid foundation for machine tools, large surface plates, automation lines, tool room and production equipment of all types. Periodic leveling? It's a matter of seconds! Simply turn hex-screws . . . your machine is set level . . . kept level!

Combined with Vi-Sorb Mounting Pads, Empco Jacks control vibration within the machine itself, reduce transmitted noises, retard machine creepage and frequently eliminate the need for anchor bolts!

Support? Up to 10 tons each! Available in six styles, 25 models . . . an Empco Jack to meet every job requirement. Set your machines level, keep them level. Reduce machining costs with Empco Jacks!

INQUIRE TODAY ask for Bulletin No. 100

The Enterprise Machine Parts Corp.
2727 Jerome Ave., Detroit 12, Michigan

EMPCO LEVELING JACKS

Manufacturers of Automatic Production Machines, Fixtures, Machine Parts

▲ For more details circle **NED-212 B8** on enclosed inquiry slip. ▲

▲ For more details circle NED-220 B8 on enclosed inquiry slip ▲

Flange . . . union . . . butt weld . . . aligning connector—Speedline stainless steel fittings permit a choice of joints to meet every process line requirement. Save design hours . . . save installation time . . . reduce inventory . . . get piping efficiency and economy not possible with conventional fittings! Write for free catalog today!

Distributors are located in principal cities from coast to coast

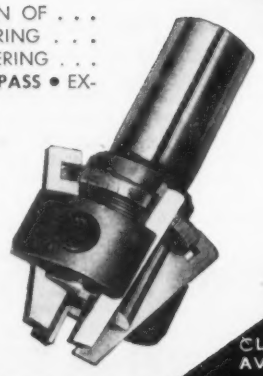
Speedline STAINLESS STEEL FITTINGS
manufactured by HORACE T. POTTS COMPANY
532 E. Erie Avenue • Philadelphia 34, Penna.

▲ For more details circle NED-221 B8 on enclosed inquiry slip ▲

KUTMORE ADJUSTABLE HOLLOW MILLS

Get Speed! Get Precision!

• ANY COMBINATION OF . . . TURNING . . . TAPERING . . . FACING . . . CHAMFERING . . . TREPANNING IN ONE PASS • EXCLUSIVE MICROMETER ADJUSTMENT FEATURE FOR RAPID SET-UP • CUTTING CAPACITIES FROM 1/32" TO 2" DIAMETER IN STANDARD STOCK.



Our Engineering Department is at your disposal on your Hollow Mill problems.

1625 CLINTON AVE. NO.
CARL WIRTH & SON, INC.
ROCHESTER 5, N.Y.
Write For Catalog 20NE

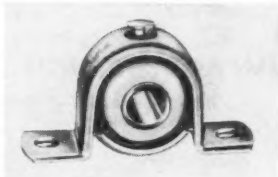
▲ For more details circle NED-222 B8 on enclosed inquiry slip ▲

NONADJUSTABLE THERMOSTAT is rated 15 amp at 115 v

Offered with a fixed setting in the temperature range of 0 to 650° F, this NorStat nonadjustable thermostat is offered with differentials of 5 to 15° F. They are rated 15 amp at 28 v dc, 15 amp at 115 v ac, and 10 amp at 230 v ac on noninductive loads. Ceramic, mica, fiber, or dry film ceramic insulators are available, and silver on nickel contacts are standard. Made by **Norwalk Thermostat Co.**, Dept. A, Norwalk, Ohio.

▲ For more details circle NED-223 B8 on enclosed inquiry slip ▲

LOW COST PILLOW BLOCK bearing held in strap-type housing



This low - cost pillow block combines a strap-type housing with a rubber isolated sleeve-bearing cartridge. Available with either double-lubricated graphited or sintered bearing, pillow block is offered for ½ through 1-in. shafts. Unit is self-lubricating, self-aligning, and quiet in operation. The 16-gage steel housing and all steel parts are cadmium plated. Unit is 4 in. long, 2 in. high, 1⅛ in. wide, and can be mounted on hole centers from 3 to 3¼ in. using 5/16 in. bolts. Shaft center height is 1 in. Made by **Randall Graphite Bearings, Inc.**, 1007 S. Greenlawn Ave., Lima, Ohio.

▲ For more details circle NED-224 B8 on enclosed inquiry slip ▲

TYPEWRITER CARBON PAPER uses plastic coating and wet ink

A plastic coating and wet ink instead of waxy carbon is employed on Nu-Kote typewriter "carbon" paper. The wet ink in the plastic creates the impression. Release of ink is uniform under a wide range of conditions, affording one or more copies. Ink dries instantly, creating clear, smudge-proof copies on almost any type of paper. Tests show Nu-Kote lasts three times as long as conventional carbon paper. It is made in letter and legal sizes and in one weight and finish, simplifying inventory and ordering. Price is $4.50 and $4.75 per box of 100 letter and legal size sheets, respectively. Made by **Burroughs Corp.**, Mittag Div., 6071 Second Ave., Detroit 32, Mich.

▲ For more details circle NED-225 B8 on enclosed inquiry slip ▲

Quicker, Easier, Less Costly
STENCILING with REYNOLDS SPRAY STENCIL INKS
quick drying—waterproof

Specially compounded ink assures utmost economy and satisfaction.

Many outstanding advantages:

MODERN easy to hold aerosol container sprays a dense cone of specially formulated opaque ink at the touch of a finger. Not a paint or lacquer. Dries instantly. Always ready to use. No brushes to clean or load. No drying out. No mess. No waste. No build-up or curtaining.

PROVEN BEST for all stenciling on boxes, crates, cartons, drums, or any steel, wood, fabric, concrete or other surface.

9 COLORS. Ideal for color coding equipment and materials, design layout work, inspection marking, department routing, signs and warnings, etc.

ASK US ALSO about Reynolds sprayed Stencil Kovar®, the opaque tan colored block-out fluid that covers over old stenciling or other markings. Dries quickly. Permits re-stenciling of original containers, correction of errors, and salvaging overruns of printed cartons.

WRITE for color card and name of nearest dealer TODAY!

REYNOLDS INK, INC.
4504 EUCLID AVE.
CLEVELAND 3, OHIO

▲ For more details circle NED-226 B8 on enclosed inquiry slip ▲

Scientific treatment gives concrete lasting beauty

Here's a low-cost Method that transforms a drab, dingy concrete floor into an attractive, colorful, easy-to-maintain surface of which you can be proud.

For new and old concrete. The MULTI-CLEAN METHOD of Floor Care is a complete, scientific program for new or old concrete. It calls for right materials, right equipment, right technique.

Under this METHOD your concrete floors are cleaned, hardened, dustproofed, and finished in your choice of clear or 7 attractive, non-fading colors. Easy to clean, resistant to abrasion, water, acids, alkalis, grease, oils, soaps, solvents.

Saves time, money. Besides providing an attractive, long-wearing surface, the scientific MULTI-CLEAN METHOD saves you hours of maintenance, gallons of material. For new folder describing step-by-step METHOD for initial treatment of new concrete or restoration of old, see local MULTI-CLEAN Distributor or write . . .

MULTI-CLEAN Method
Dept. Ne-56-28
2277 Ford Parkway
St. Paul 16, Minn.
MULTI-CLEAN PRODUCTS, Inc.

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SONOCO PAPER CONES HAVE HUNDREDS OF USES!

SONOCO can supply you with economical paper cones in practically any size—any taper—and in any quantity. These versatile cones have been the answer to many a need in production, packaging and in the toy and novelty field. They may be impregnated for strength, toughness and water resistance. Available plain or covered with novelty or trade-mark wrap; also in solid colored stock. Made to your specification. Write for full information and samples!

SONOCO Paper Products
SONOCO PRODUCTS COMPANY
MAIN OFFICE — HARTSVILLE, S. C.
PLANTS FROM COAST TO COAST
1351

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COMPLETE LINE ⅛" THRU 4½"
NYE PIPE VISE with BUILT-IN BENDER

Easily the best tool of the kind . . . with ORIGINAL long jaws. Full range of sizes ⅛" thru 4½". Heavy malleable iron construction with built-in pipe rest and bender. Self-locking. Easy to use. Thoroughly dependable.

Order today from your supply house

NYE
NYE TOOL COMPANY
4126 WEST FULLERTON AVE., CHICAGO 39, ILLINOIS

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ADJUSTABLE BALL JET SPINDLE KIT

In 5 minutes with this kit you can assemble a precision air gage spindle for any size hole between 1" and 3" diameter and with gage block accuracy. In increments of .0001", this kit gives you the equivalent of 20,000 gaging spindles at a cost of less than ten cents apiece—and not even one master setting ring is needed.

Exactly what is needed for short runs or to pinch hit in an emergency.

Get a free demonstration of Sheffield Adjustable Air Gage Tooling, or write to The Sheffield Corporation, Dayton 1, Ohio—Dept. 13.

7437

the SHEFFIELD corporation of Bendix Aviation

manufacture and measurement for mankind

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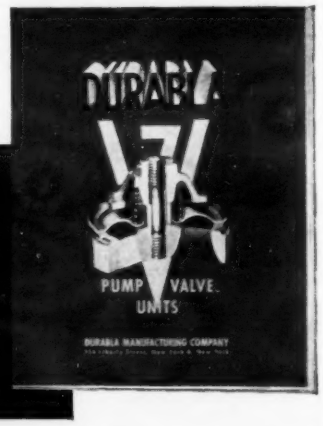


DATA you need

to select improved valves for your pumps

Famous for sustained efficiency under widely varied service conditions, DURABLA Pump Valve Units have been redesigned to incorporate a new taper-lock* stud, self-locking nut and drop-on guard. This improved design offers *seven new points of superiority.*

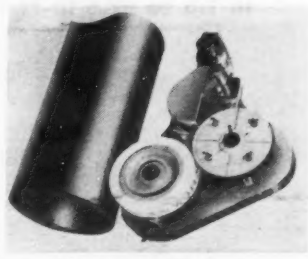
The booklet shows how DURABLA Pump Valve Units can benefit your pumps. Includes design details, materials available, table of seat sizes and dimensions. Send for free copy of Form 400 NED28.

DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N.Y.

*Patent Pending DURABLA® DM-29

▲ For more details circle NED-231 B8 on enclosed inquiry slip ▲

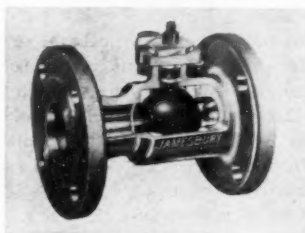
OFFSET PRINTER
production-prints bar, tube, pipe



Continuous lineal printing on steel, aluminum, or plastic pipe, bars, tubing, or similar products is function of the No. 248 offset printer. Mounted over a production line, it prints on any size product from ½ in. OD and up. Speed can be as high as 1000 fpm. Two sizes of type wheels print trade mark, date, coil number, size, or other data. Made by **Jas. H. Matthews & Co.**, 3943 Forbes St., Pittsburgh 13, Pa.

▲ For more details circle NED-233 B8 on enclosed inquiry slip ▲

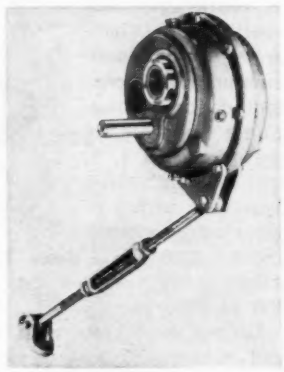
FLANGED BALL VALVES
afford full pipeline flow



Now available in ½ to 2-in. sizes, flanged Double-Seal ball valves are leakproof and afford full pipe line flow. They do not require lubrication, have positive shut-off, and operate at low torque over full range from vacuum to rated pressure. Seats and seals are interchangeable and replaceable. Made by **Jamesbury Corp.**, Dept. NE, 45 New St., Worcester, Mass.

▲ For more details circle NED-234 B8 on enclosed inquiry slip ▲

GEAR REDUCER
shaft mounted unit needs no base



Need for motor bases, rails, supporting structures, and flexible couplings is eliminated by this shaft mounted gear reducer offered in single and double reduction types of 4.5:1 and 14.7:1 ratios. Unit makes possible infinite speed ratios through use of variable speed pulleys, or by changing sheaves, sprockets, or prime mover speed. Horsepowers range from fractional to 120; output speeds from 8 to 425 rpm. Unit can be mounted vertically or at any angle. Hollow shaft bores range from 1 7/16 to 5 15/16 in. A roller backstop can be furnished for protection against reversal of direction on inclined conveyors, horizontal mixing drums, and similar equipment. Made by **Lovejoy Flexible Coupling Co.**, 4891 W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-235 B8 on enclosed inquiry slip ▲

work in complete safety with McGILL® grounded portable lamp guards

Concern for the safety of your workers can be completely satisfied with McGill grounded portables. Their exclusive grounding design provides positive protection against shock not available when ordinary guards wear out, contact exposed wires or are shorted internally. Each model built for three wire cord to accommodate a three blade plug and a built in extension outlet for 2 parallel blades and a 3rd U shaped blade for ground. Especially made for rugged industrial service with molded phenolic handles, extra heavy wire cages, the famous LEVOLIER switch and molded in outlet. Switch and outlet optional.

Available from Electrical Wholesalers

No. 5025-SRG
* CONFORM TO NEC
* GROUNDING ADOPTED AS STANDARD BY AMERICAN STANDARD ASSOCIATION
* UNDERWRITER'S LABORATORIES INSPECTED

WRITE FOR YOUR FREE McGILL CATALOG No. 84

YOU CAN DEPEND ON McGILL QUALITY

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

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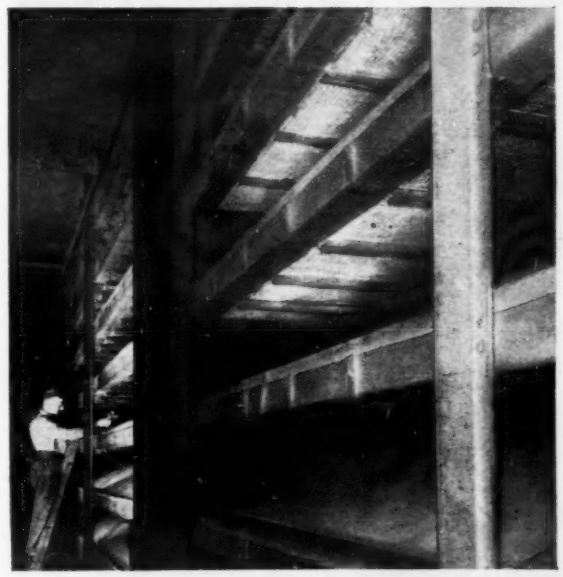


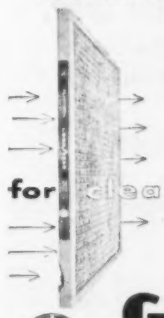
Cleaner Air with Half the Filters

A large metropolitan library was using banks of two 1"-thick throwaway filters in series to clean intake air. But the surfaces quickly clogged with dirt, and operating costs became excessive.

Then, they tried PLIOTRON—the world's first truly washable, electrostatic, panel-type air filter.

They soon found single banks of PLIOTRON, 1"-thick—*only half the number*—cleaned the air better, did not clog and were easily cleaned for repeated use. That's because the unique filter medium of PLIOTRON carries a permanent, electrostatic charge that actually attracts and captures up to five times as many fine dirt particles. It also permits depth-loading rather than surface-loading, and maintenance of full efficiency by simple washing.

PLIOTRON can bring greater efficiency to any forced-air heating or air-conditioning system using panel filters. For details see your PLIOTRON Distributor. Or write Goodyear, P. O. Box 288, Akron, Ohio.



for cleaner air everywhere—

PLIOTRON AIR FILTER BY GOODYEAR

THE GREATEST NAME IN RUBBER

Pliotron—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

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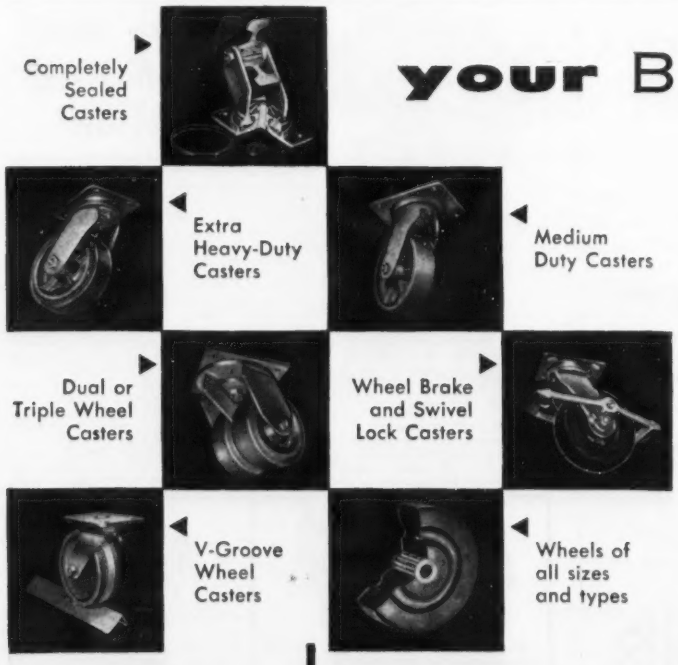
your BEST move!



ALBION *industrial...* CASTERS

Albion casters checkmate your materials handling problems. They are versatile, dependable, economical and available *right now.* Whether you need a caster for light, medium, heavy or extra heavy duty requirements—standard or special—Albion casters are the practical answer.

Albion casters are available in every conceivable range of Industrial size, type, capacity and desired wheel type to suit your needs.

Make the *best* move...get all the facts on Albion Casters today. Write, wire or phone for the information you need. Albion is always at your service.

Do it now... request your copy of the Albion Caster and Wheel catalog. Yours for the asking.

ALBION INDUSTRIES, INC.
Distributors in Every Strategic City
Main Plant: ALBION, MICHIGAN

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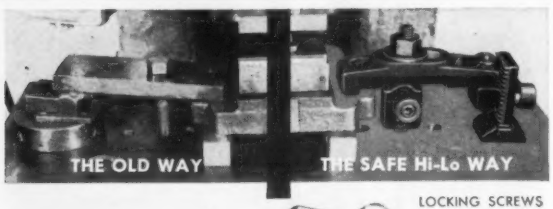


self-contained... rapid adjustable CLAMPS

• Designed to overcome three major clamping problems . . . time consuming . . . bolt stripping waste . . . and unsafe set-ups. • All component parts stay integral—NO LOOSE PIECES • All parts are steel forging, heat treated for maximum toughness • Serrated bolt and step block adjustment design provides rigid, parallel clamping for safe set-ups

Ask about FREE demonstration . . . Hi-Lo Kits . . . and full particulars. Write to:

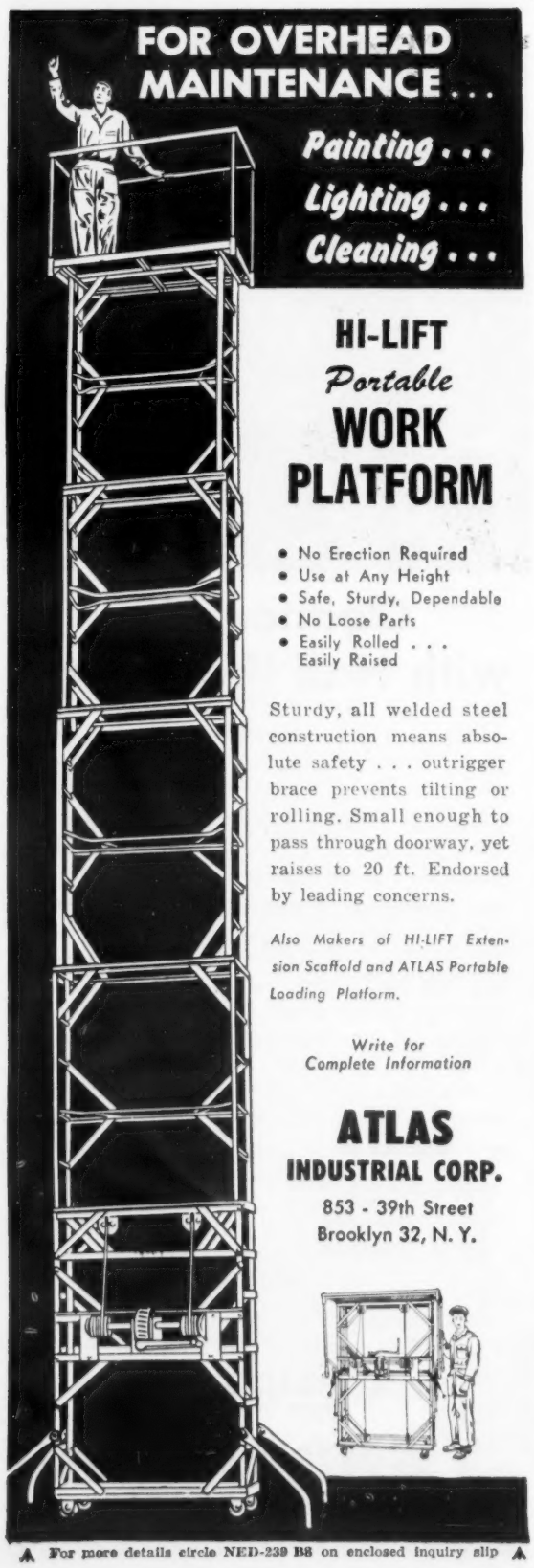
AVAILABLE: Distributorship in some U.S. areas

Hi-Lo PRODUCTS COMPANY
Div. of Steel City Testing Machines, Inc.
8819 Lyndon Ave., Detroit 38, Mich.

For more details circle NED-238 B8 on enclosed inquiry slip

FOR OVERHEAD MAINTENANCE...

Painting...
Lighting...
Cleaning...



HI-LIFT *Portable* **WORK PLATFORM**

- No Erection Required
- Use at Any Height
- Safe, Sturdy, Dependable
- No Loose Parts
- Easily Rolled . . . Easily Raised

Sturdy, all welded steel construction means absolute safety . . . outrigger brace prevents tilting or rolling. Small enough to pass through doorway, yet raises to 20 ft. Endorsed by leading concerns.

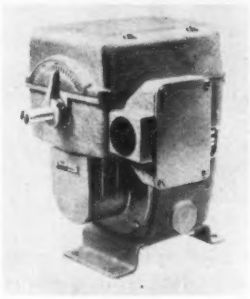
Also Makers of HI-LIFT Extension Scaffold and ATLAS Portable Loading Platform.

Write for Complete Information

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

For more details circle NED-239 B8 on enclosed inquiry slip

CONTROL DRIVE MOTOR
for valves, dampers, speed changers in 1.5 to 62.5 lb-ft torque outputs



Designed to operate valves, dampers, louvers, rheostats, speed changers, and other devices in accordance with signals generated by electric control devices, this motor is offered in two models. Each has two-position floating or proportional control forms, and various speeds and torques. The two series have output torque ranges of 1.5 to 31.5 lb-ft and 3.1 to 62.5 lb-ft. Stall torques are a minimum of twice the rated torques.

Two-position and floating control models can be adjusted for 35 to 335-degree rotation, and the proportional model for 35 to 100-degree rotation without loss of reversing rotation. External relay permits the floating model to be made unidirectional or arranged for reversing for more than one complete revolution of the output shaft. Motors are available for operation on 115 or 230-v 50 or 60 cycle ac or 115-v 25 cycle ac. Made by **Minneapolis-Honeywell Regulator Co.**, Brown Instruments Div., Wayne & Roberts Ave., Philadelphia 44, Pa.

For more details circle NED-240 B8 on enclosed inquiry slip

CENTRIFUGAL ROOF VENTILATORS
in direct and belt drive models with capacities to 23,427 cfm

Ten direct - drive and 11 belt - drive sizes comprise line of centrifugal roof ventilators. Direct-drive spun aluminum units with contoured, roof - hugging appearance are offered in 7, 9, 10, 12, and 13-in. diameters with volumes ranging from 180 to 2330 cfm. Sizes 15, 16, 18, 20, and 22 in., either direct, or belt driven, have capacities from 900 to 6596 cfm.

Larger steel units with angle iron isolation bases and rubber-in-shear vibration isolators are offered in belt driven sizes of 24, 27, 30, 33, 36, and 40 in. Air volumes range from 2170 to 23,427 cfm. Ferrous parts are phosphatized and finished with two coats of weather-resistant baked enamel. Inlet orifice of these ventilators is true spun as an integral part of aluminum or steel base section, allowing maximum air entrance with minimum turbulence. Made by **Trane Co.**, 2018 Cameron Ave., La Crosse, Wis.

For more details circle NED-241 B8 on enclosed inquiry slip

Type W5 VARIAC
900 va; 7.8 max. current
0-115 or 0-135 v output
$17.00

Variac® the Original

Continuously-Adjustable Autotransformer for S-M-O-O-T-H Control of All A-C Operated Devices

- ★ Output voltages continuously-adjustable from 0 to 117% of line voltage
- ★ Dials calibrated directly in output voltage
- ★ EXCLUSIVE DURATRAK contact surface for extra-long life
- ★ Power ratings from 270 va to 104 KVA
- ★ Available in single-unit models or ganged assemblies for multi-circuit or polyphase line connections
- ★ Standard 50-60 cycle and 350-1200 cycle models
- ★ Open, enclosed, ball-bearing and motor-driven standard models
- ★ Special designs made for quantity orders

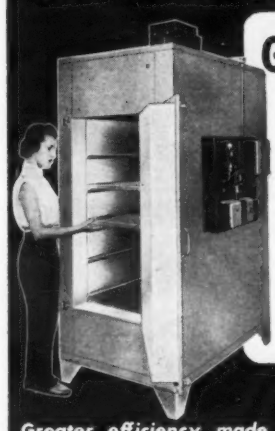
Write for "VARIAC BULLETIN"

GENERAL RADIO Company
275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA — 1000 N. Seward St. LOS ANGELES 38
8055 13th St. Silver Spring, Md. WASHINGTON, D. C. — 1150 York Road, Abington, Pa. PHILADELPHIA
1182 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO — 6605 W. North Ave., Oak Park, Ill. CHICAGO
In CANADA: 99 Floral Parkway, TORONTO 18

For more details circle NED-242 B8 on enclosed inquiry slip

CUT OVEN COSTS 2 WAYS!



Grieve-Hendry STANDARD CABINET OVENS

1. LOWER FIRST COST — Through Size Standardization.
2. LOWER OPERATING COSTS — Through reduced heat losses.

Greater efficiency made possible by THESE FEATURES . . .

- 20% more insulation.
- No metal-to-metal contact.
- Selective heat intensity control.
- Constructed for heavier loads and faster processing.

Designed to include the latest convenience features and safety devices.

Specialists in precise temperatures and programmed processing. We offer you engineering consultation on your oven requirements. Call or write.

Standard models to 1000° F.

$110.50 and up

Immediate delivery

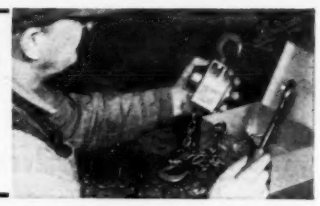
Dealers inquiries invited

GRIEVE-HENDRY COMPANY, INC.
1408 W. Carroll Ave., Chicago 7, Ill.
Export Dept. 10406 S. Western Ave., Chicago 43, Illinois

For more details circle NED-243 B8 on enclosed inquiry slip

ENTIRELY NEW LEVER PULLER
— positive friction brake holds load in any position

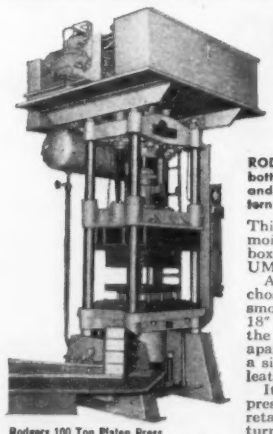
You have to see a Peerless Pal to appreciate its compactness. The ¼-ton unit is packaged in an attractive metal box with carrying handle. The container is also capable of holding a capacity-doubling snatch block. The ½-ton unit is only slightly larger.



Lift a load, lower a load, drag a load smoothly with the entirely new Peerless Pal Lever Puller. A true friction brake holds it safely in any position. The Peerless Pal is so light and compact that it can be carried in the palm of your hand. Fully enclosed construction, too, makes it ideal for use in shops, on trucks, on farms, in service stations, on the highway, around boats. Write for Bulletin P-40 today.

THE HARRINGTON COMPANY
Plymouth Meeting 16, Pa.

For more details circle NED-244 B8 on enclosed inquiry slip



Rodgers 100 Ton Platen Press with high speed circuit for fast approach and return of platen. Upper knock-outs pneumatic die cushion. Accurate clamping pressures insure smooth, even draws.

draws 5½" deep in one SMOOTH OPERATION!

RODGERS PLATEN PRESS forms 220 tackle box bottoms per hour with a single draw 5½" deep and retains the leather-grained embossed pattern without distortions or fractures.

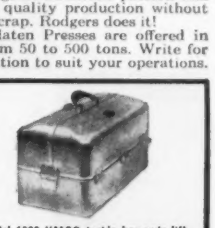
This strong, lightweight, rust-proof and moisture-proof aluminum fishing tackle box is the new Model 1000, made by the UMCO Corp. of Minneapolis, Minn.

A Rodgers 100 Ton Platen Press was chosen by UMCO because of its extremely smooth, efficient operation. The bottom, 18" long, 9" wide, is drawn 5½" in depth—the top is formed in one draw and cut apart—the carrier band is also formed in a single operation. Material is 18 gauge, leather-grained, embossed aluminum.

It requires a really smooth operating press to make these deep draws and still retain the original embossed pattern and turn out top quality production without fractures or scrap. Rodgers does it!

Rodgers Platen Presses are offered in capacities from 50 to 500 tons. Write for more information to suit your operations.

Light, rust and moisture-proof aluminum tackle box having 53 plastic lined compartments, by UMCO.



Model 1000 UMCO tackle box puts lift at bottom—where it belongs.

Rodgers Hydraulic Inc.
7425 Walker Street • Minneapolis 26, Minnesota

HI-PRESSURE Rodgers HYDRAULICS

For more details circle NED-245 B8 on enclosed inquiry slip

SOLID CARBIDE DRILLS and REAMERS

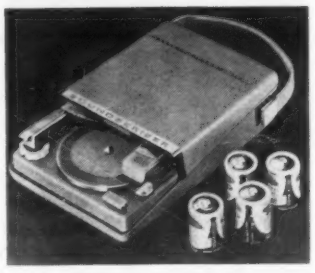
—precision machine ground. —complete size range in stock, specials available. —quality proved by Elgin for accuracy and long life.

WRITE TODAY for details on this latest addition to Elgin's "Golden Circle" Rotary Tool Line of solid carbide burs and end mills.

ABRASIVES DIVISION, DEPT. I
ELGIN NATIONAL WATCH COMPANY
Elgin, Illinois

▲ For more details circle NED-246 B8 on enclosed inquiry slip ▲

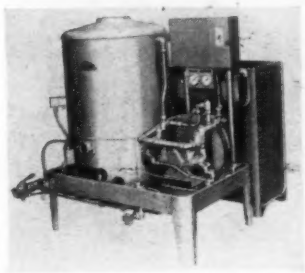
PORTABLE DICTATING MACHINE
powered by four flashlight batteries



Transistorized, weighing only 6 lb, self-contained, and powered by four flashlight batteries, this Model 200-B SoundScriber portable dictation machine is compact and easy to use. It records on a 15-minute plastic disc, which can also be played on a 33⅓-rpm home phonograph, and is mailable in a business envelope at letter rates. Made by **SoundScriber Corp.**, North Haven, Conn.

▲ For more details circle NED-249 B8 on enclosed inquiry slip ▲

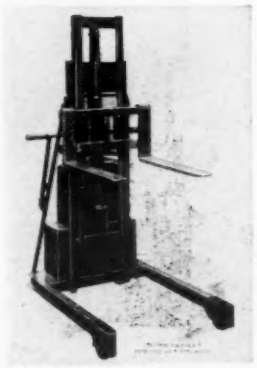
STEAM CLEANER
heavy duty 280-gph unit



All or any part of 280 gal of balanced cleaning solution is delivered per hour by the 280 Blast-Master heavy duty steam cleaner. The self-contained, automatic unit has a Fleximatic control which regulates fuel and water flow, permitting the operator to select the desired delivery from one or two guns. Cleaner shuts down completely when the gun-squeeze triggers are released, and responds instantly when the trigger is squeezed. Controlled vapor delivery permits cleaning at distance of 3 ft or more from nozzle. Made by **Clayton Mfg. Co.**, Dept. N, 401 N. Temple City Blvd., El Monte, Calif.

▲ For more details circle NED-250 B8 on enclosed inquiry slip ▲

MULTIPLE LIFT TRUCK
converts into five special units



This portable Multi-Lift can be converted into a platform, fork, or barrel lift; a tipper; stacker-crane; or bumper jack in seconds without tools. Power Pac unit has built-in battery charger and special housing for easy servicing. If electric lifting is not desired, a manually operated unit is available. Unit is maneuvered by push-pull adjustable handle. A budget, non-telescoping model is also offered. Made by **Stratton Equipment Co.**, Dept. AA, 2030 E. 105th St., Cleveland 6, Ohio.

▲ For more details circle NED-251 B8 on enclosed inquiry slip ▲

It is our engineering specialty to

STOP PULSATION —from surges created by compressors, pumps, blowers and pressure reduction systems.

STOP NOISE —from intake or discharge of air, steam or gas from engines, compressors and vacuum systems.

The Burgess-Manning Snubbing Principle, engineered to your specific problems, will provide noteworthy savings in operating and installation costs, increased production, reduced maintenance, improved public and employee relations and prevention of compensation claims.

We invite you to present your problems for recommendations.

BURGESS-MANNING COMPANY
Sound Engineering 755 East Park Avenue, Libertyville, Illinois
Dallas, Texas

▲ For more details circle NED-252 B8 on enclosed inquiry slip ▲

Mr. Hi Frequency, the Electronic

"policeman" Nabs Tramp Metal

ALLIS-CHALMERS METAL DETECTOR

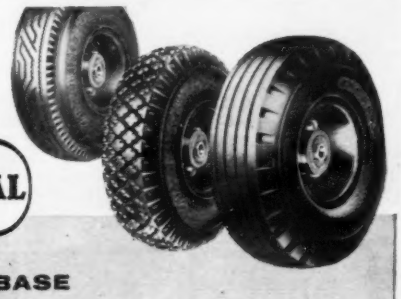
Gives Positive Protection

THIS electronic policeman on your production beat always protects against trouble-causing, quality-robbing tramp metal. Magnetic or non-magnetic particles, no matter how deeply embedded, cannot get past the unfailing eye of the metal detector without triggering the warning or reject mechanism.

The Allis-Chalmers metal detector is economical to operate and is easily installed in any production set-up. For complete information, contact your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wis. Ask for Bulletin 15B7217B.

ALLIS-CHALMERS A-C
A-5286

▲ For more details circle NED-247 B8 on enclosed inquiry slip ▲



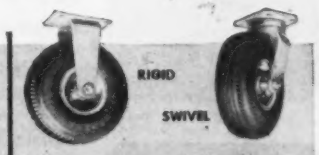
THE GENERAL TIRE

WIDE-BASE PNEUMATICS BY

GENERAL

SAVE TIME, LABOR, MONEY!

Under all job and load conditions, long-wearing General Wide-Base Pneumatics are tops for dependable high-speed performance. Featuring high flotation for easier rolling, they cushion loads and equipment, save high cost floors and floor surfaces, give you greater load capacity. You'll find the exact design you need in General's complete line.



Available separately or in assemblies of tires, tubes and wheels. Size O.D. 8" to 35"—200 to 7890 lbs. capacity for low or high speeds.

CASTER FORKS

Available in identical pairs in a wide range of sizes, these wide-base caster forks are engineered to carry heavier loads without adding dead weight to equipment.

SEND FOR CATALOG, DEPT. 4

THE GENERAL TIRE & RUBBER CO. • AKRON, OHIO

▲ For more details circle NED-253 B8 on enclosed inquiry slip ▲

How we eliminated two costly operations with Du Pont Industrial Rivets

by Abe Cohn, Lee Mark Manufacturing Co., Phila., Pa.

Du Pont Industrial Rivets eliminated two costly operations, tapping and screwing, by replacing screws to fasten the Masonite strip around the door of this sandwich unit. Expanded by applying heat to the head, the rivets give a clean, finished appearance. Tight fit prevents the loss of cold.

Fastening a Masonite strip around the door of a refrigerated sandwich counter we make meant drilling, tapping and screwing.

By changing to Du Pont Rivets, we eliminated tapping and screwing. Now, we simply drill the holes—insert the rivets—and expand them with a Du Pont Riveting Iron, or suitable commercial soldering iron (*insert*). It's much faster and easier.

We don't have to worry about close drilling tolerances because the shank of the rivet expands, filling the hole completely. The tight fit also prevents the loss of cold.

There's no chance of cracking the Masonite with Du Pont Rivets because there's no hammering required. They don't have to be refinished. Rivet heads are perfectly smooth, with no holes or slits where dirt can accumulate.

This example may show how Du Pont Rivets can reduce your costs and solve your fastening problems. Give them a try and see for yourself. They come in a wide range of sizes and metals. Contact your jobber for more information, or write to E. I. du Pont de Nemours & Co. (Inc.), 2543 Nemours Building, Wilmington 98, Delaware.

DU PONT

DU PONT INDUSTRIAL RIVETS
A Product of Du Pont Research
Better Things for Better Living . . . through Chemistry

SEE DU PONT SHOW OF THE MONTH ON CBS

▲ For more details circle NED-248 B8 on enclosed inquiry slip ▲

The FEDERAL "55" gives you

OVERSIZE DIMENSIONS

Eliminates the need for larger, more costly equipment! Boosts production on big and bulky jobs!

Here's a press that will handle big, bulky jobs ordinarily requiring larger, more expensive equipment. Equipped with foolproof air clutch, its speed is increased many times, safely and with better control. Only the finest components are used in the "55". Workmanship, as in all Federal Presses, is unexcelled. Flywheel or geared. Mechanical clutch standard. Write.

FEDERAL PRESS COMPANY
806 Division St., Elkhart, Ind.

FEDERAL Open-back Inclinable PRESSES
33 Years of Quality Construction

For more details circle NED-254 B8 on enclosed inquiry slip

Convair helps improve plant hygiene with SBS-30 waterless skin cleanser

In this ultra-modern plant are produced many of Democracy's air defenses. Here, too, is achieved an ultra-modern plant hygiene program with the help of SBS-30 Waterless Skin Cleanser.

To maintain cleanliness on this priority production, Convair has installed SBS-30 Waterless Skin Cleanser dispensers in "difficult soil areas". SBS-30 affords this fast, safe and thorough "on-the-job" way of cleaning that requires no water, plumbing or complicated installation.

Wherever they are installed, SBS-30 Waterless Skin Cleanser dispensers help Convair to produce savings through greater "on-the-job" efficiency. Man-hours are saved by reducing the number of trips to distant wash areas. The incidence of industrial dermatitis is reduced through improved personal hygiene.

Why don't you, like Convair and hundreds of other industrial leaders, take a serious look at SBS-30 Waterless Skin Cleanser. WRITE TODAY—we'll rush complete, detailed literature.

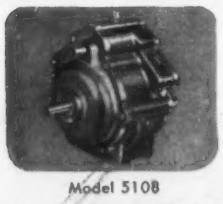
Write Dept. 58-B6

SBS sugar-beet products co.
SBS WATERLESS WASHSTATION*
"Brings the Washroom to the Worker" *
MAIN PLANT: 302 Waller St. Saginaw, Michigan
Los Angeles, California • Newark, New Jersey
CANADIAN SUBSIDIARY: Chemical By-Products, Ltd., 23 Racine Road, Rexdale, Ontario, Canada
*Trademark

For more details circle NED-255 B8 on enclosed inquiry slip

Smooth Power

S-N 4 IN 1 REVERSING TRANSMISSIONS


Model 5108

Model 5201

Combine Forward • Neutral • Reverse • Reduction Up to 28 H.P.

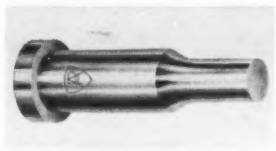
Performance proven in thousands of machines, these midgets in size—but giants in power—solve many design and transmission problems. Engineered for maximum efficiency and economy—reverse quickly and smoothly under full load. Model 5108 up to 8 H.P.—Model 5201 up to 28 H.P.

Write for technical literature!

SNOW-NABSTEDT
Transmission Engineers
FOR OVER HALF A CENTURY
INDUSTRIAL DIVISION
THE SNOW-NABSTEDT GEAR CORP. HAMDEN, CONN.

For more details circle NED-256 B8 on enclosed inquiry slip

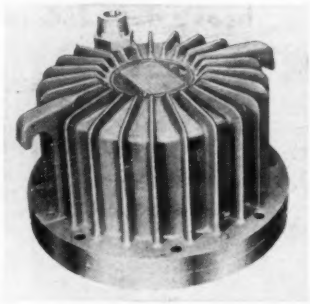
SHOULDER PUNCHES
1/32 to 1 in. point diameters



Vanadium tool steel shoulder punches in the AP Series are stocked in shank diameters from 3/16 to 1 in. and in round point diameters from 1/32 to 1 in. They are heat treated for uniform hardness. Points of any shape or size can be made to specifications. Special alloys for piercing unusually tough steels can be furnished. Made by **Allied Products Corp.**, Richard Brothers Punch Div., 26482 Capitol Ave., Detroit 39, Mich.

For more details circle NED-257 B8 on enclosed inquiry slip

IMMERSIBLE MOTOR
in ratings from ¼ to 40 hp



Designed for close-coupling to agitators or pumps in sump, chemical, water, or abrasive industrial oil service, this immersible motor is of flange-mounted type. Motor shaft can be attached directly to the impeller, and both the motor and pump can be lifted by the motor's lugs. Features include leak-tight construction, neoprene breathers, waterproof cable connection, compact design, and corrosion resistance. Single and polyphase types are available with ratings from ¼ to 40 hp. Made by **Louis Allis Co.**, Dept. P, 428 E. Stewart St., Milwaukee 1, Wis.

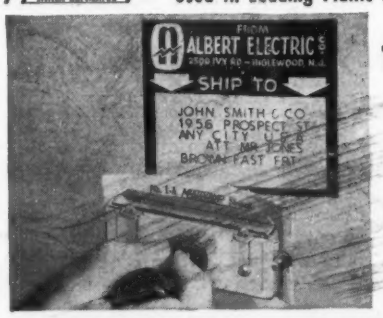
For more details circle NED-258 B8 on enclosed inquiry slip

ELEVATING TRUCKS
four models have telescoping masts

Capable of clearing standard doorways, this line of Safeway portable elevating trucks is equipped with telescoping masts for lifting 1000-lb loads up to 10 ft 10 in. Power for lifting is furnished by a 12-v, battery-operated, hydraulic system. Standard model has 26-in., adjustable forks. Other fork lengths, drum-stacking devices, crane booms, rams, or platforms are available and can be quickly changed in the field. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.

For more details circle NED-259 B8 on enclosed inquiry slip

MULTISTAMP Used In Leading Plants All Over the World



The Quick.. Accurate Way to Address Shipping Cartons

VOLUME MARKING

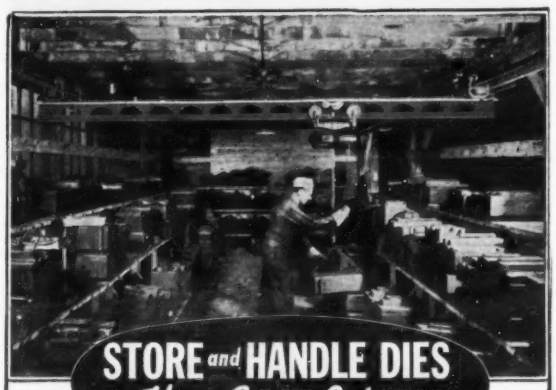
Print shipping information direct on cartons, boxes, packages. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil . . then type or write in address or identification data . . attach to duplicator . . and print. Write for literature and free sample FORM-CUT stencil.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Model 1A shown in use above, complete with supplies in sturdy case, $12.50 f.o.b. factory. No. 3 Outfit (at right) $19.50 f.o.b. factory. Also ideal for addressing shipping tags, labels. Prints forms, bulletins, post cards, etc. At office and shipping room supply dealers.

OVER 35 YEARS MULTISTAMP STENCIL DUPLICATOR ® THE MULTISTAMP CO. NORFOLK, VA.

For more details circle NED-260 B8 on enclosed inquiry slip



STORE and HANDLE DIES This Easy Way

A vexing die storage and handling problem was solved by a shelf arrangement, illustrated, and use of a simple hand-propelled crane with electric hoist. Dies are stored in numbered positions which are indexed. The crane makes it easy to reach every die.

GET THIS BOOK!
BOOK No. 2008
Packed with valuable information . . .

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6629 East 285th Street, Wickliffe, Ohio

CLEVELAND TRAMRAIL

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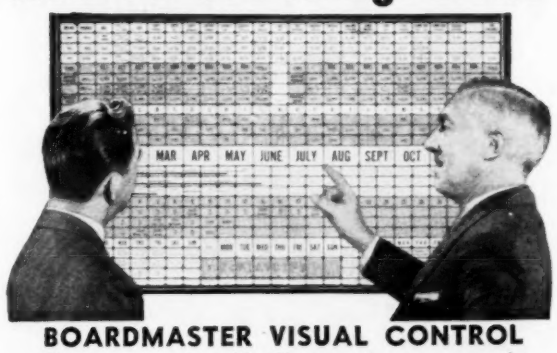
How To Get Things Done



BOARDMASTER VISUAL CONTROL

Gives you a Graphic Picture of your operations, spotlighted in color. You See what is happening at a glance. Facts at eye level—saves you time, prevents errors.

Simple, flexible—easily adapted to your needs. Easy to operate. Type or write on interchangeable cards, snap in grooves. Ideal for production, scheduling, sales, traffic, inventory, etc. Made of metal. Compact, attractive.

Complete Price $49.50 Including Cards

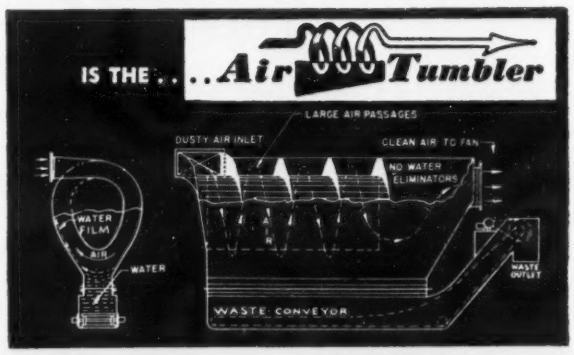
FREE 24-Page Illustrated Booklet N-500 Mailed Without Obligation

GRAPHIC SYSTEMS 55 WEST 42ND STREET NEW YORK 36, N. Y.

For more details circle NED-262 B8 on enclosed inquiry slip

The MASTER of DUST in INDUSTRY

IS THE . . . Air Tumbler



SIMPLE—DEPENDABLE—NO FIRE HAZARD
HIGH EFFICIENCY—CONSTANT CAPACITY
LOW HUMIDIFICATION—LOW OPERATING COST

More than one million CFM in ONE plant

Write for Bulletin No. 551. Address:

DUST SUPPRESSION & ENGINEERING CO.
P. O. BOX 67 • LAKE ORION, MICHIGAN

For more details circle NED-263 B8 on enclosed inquiry slip

CUT FASTENER COSTS WITH TINNERMAN

Speed Nuts®

Popular cost-cutters on thousands of assembly lines . . . Tinnerman "U" and "J" Type SPEED NUTS! These versatile, spring steel fasteners snap into place by hand, are self-retained in screw-receiving position. They furnish secure, vibration-proof attachments, eliminating welding, clinching, staking, tapping of holes, costly threaded inserts. Available for a full range of screw sizes and panel thicknesses. Write for complete details.

TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

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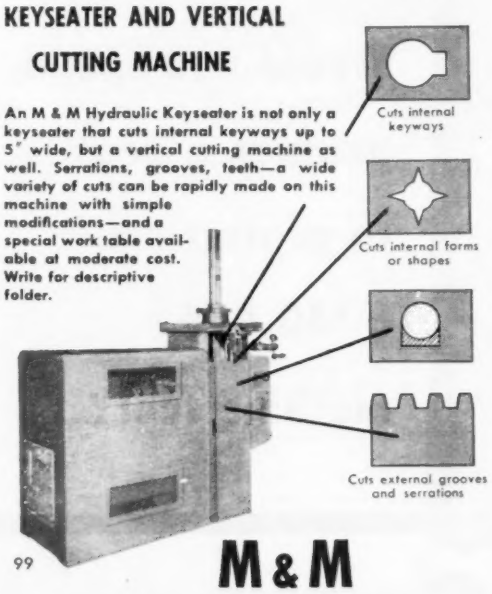
TRIPLE THE USEFULNESS OF YOUR M&M KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



99

M&M

KEYSEATERS AND VERTICAL CUTTING MACHINES

MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

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Townsend Lockbolts Provide Efficient Fastening

Townsend Lockbolts* save weight—give higher clinch than rivets—more uniform clinch than nuts and bolts—combine advantages of both—eliminate disadvantages.

Townsend Lockbolts are designed and produced to meet the highest specifications and requirements of any industrial application.

Townsend Lockbolts are available from complete stocks in a wide range of diameters, grip lengths and head styles in alloy steel and aluminum alloy.

For data on Townsend Lockbolts, write for bulletin TL-101a, Townsend Company, P. O. Box 237-G, New Brighton, Pa.

*Licensed under Huck patents RE 22,792; 2,114,493; 2,527,307; 2,531,048; 2,531,049; and 2,754,703

Townsend Company
NEW BRIGHTON, PA.

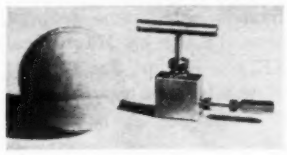
▲ For more details circle NED-266 B8 on enclosed inquiry slip ▲

PORTABLE WELDING SCREEN
kit assembled with pipe or tubing

Porto-Screen portable welding screen is offered in kit form with hinges, tees, treated fabric, and hooks. It is assembled in minutes with any stock ½-in. pipe or tubing and an Allen wrench to form a fireproof shield for on-the-spot protection from flash, arc, sparks, hot chips, or flying abrasives. Standard 6 x 12-ft size has a 6-ft center section and 3-ft wings. Other stock sizes are 6 x 9, 5 x 12, and 5 x 9 ft. Special sizes can be made. The yellow or green UL-approved duck resists fire, water, and mildew. Made by **Frommelt Industries,** Dept. S. A., Box 419, Dubuque, Iowa.

▲ For more details circle NED-267 B8 on enclosed inquiry slip ▲

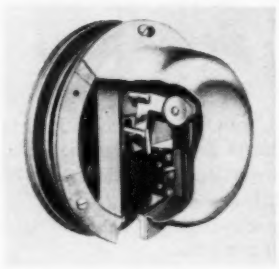
HIGH PRESSURE VALVE
miniature size gives close control



Designed for use in the petroleum, chemical, and process fields, this tiny valve fits 1/16-in. tubing and will handle pressures to 15,000 psi. Small enough to fit inside a tennis ball, it has a nonrotating stem to assure positive seating. It is available in stainless steel, Monel, or Hastelloy for standard compression, socket weld, and IPS connections. Made by **High Pressure Equipment Co.,** Dept. NED, 1222 Linden Ave., Erie, Pa.

▲ For more details circle NED-268 B8 on enclosed inquiry slip ▲

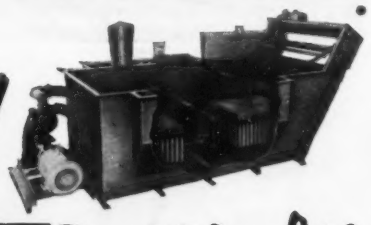
BIN LEVEL INDICATOR
control unit cover easily removed



Twist lock cover is a feature of the improved automatic Bin - Dicator bin level indicator and control unit. Developed for hard-to-get-at installations, it has slotted hex-head screws which need only be loosened to expose the entire operating mechanism when the cover is removed. A vented housing relieves any pressure build-up as the diaphragm is flexed in response to pressure of the material in the bin, silo, hopper, or chute. Diaphragm assembly is more easily changed than in previous models. Device can be used for automatic control of signal lights, horns, bells, conveyors, or feeding machinery. Made by **Bin-Dicator Co.,** 13946-100 Kercheval Ave., Detroit 15, Mich.

▲ For more details circle NED-269 B8 on enclosed inquiry slip ▲

NEW



Delpark Dual Manifold Filter-Matic

FOR CONSTANT, HIGH EFFICIENCY FILTRATION

- 5-1000 g.p.m. flow capacities
- 2 filter element designs
- 2 forms of permanent filter media
- Smaller in size—higher flow rate
- Automatic self-cleaning
- Opposite cycling cleans one manifold while the other filters
- Absolute filtration with precoat
- Clean liquid reservoir separate from filter

Write for more complete information.

Delpark —First in Filtration Advancement

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

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NEW SILASTIC 916
SILICONE RUBBER

MAKES TOUGHER PARTS
- High Tensile Strength
- High Elongation
- High Tear Strength
- High Thermal Stability

Silastic* 916, a new Dow Corning silicone rubber, withstands hard use and provides long, dependable service at —130 to 500 F. Retains excellent dielectric properties; resists moisture, weathering, corrosive atmospheres. New folder gives complete application data.

*T.M. REG. U.S. PAT. OFF.

GET THIS FOLDER NOW!
ADDRESS... DEPT. 542a

first in silicones
Dow Corning CORPORATION
MIDLAND, MICHIGAN

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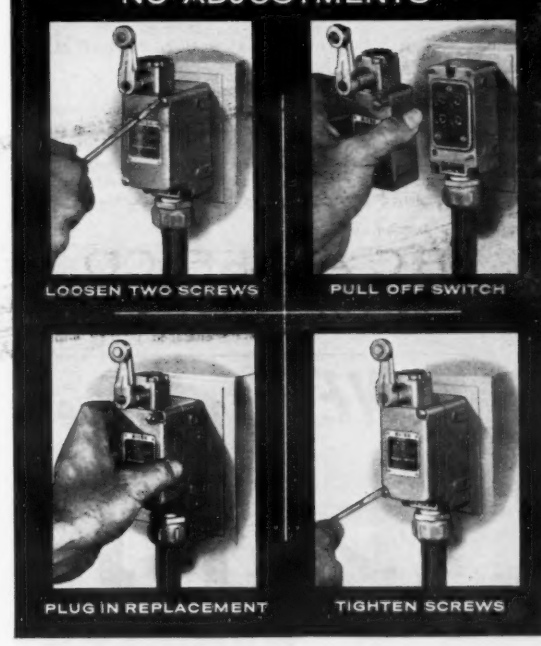
MICRO SWITCH Precision Switches

You can replace this precision switch in 20 seconds!

ACCURATE POSITIONING NO ADJUSTMENTS



The new MICRO SWITCH "Plug-in Limit" saves many precious minutes of downtime on your high-speed automatic production lines. It plugs in like a radio tube—can be replaced in a fraction of the time required for ordinary limit switches.

This sensational new type "LS" switch offers all the features of rugged construction and precise, long-life operation as the industry-proved "1LS1" switch.

Wiring connections are made to a sealed terminal block enclosure which is permanently mounted to the machine. The switch enclosure, including all moving and mechanical parts, is plugged on to this block and precisely positioned by means of dowel pins.

MICRO SWITCH "Plug-in Limit" switches are available at authorized distributors in key cities everywhere. Look in the Yellow Pages under "Switches, Electric." Send for Bulletin No. 20.

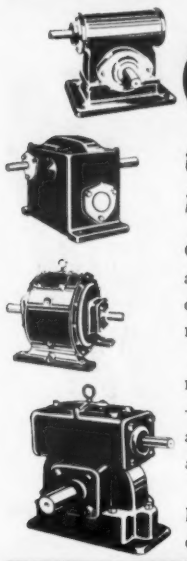
MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS

First in Precision Switching

▲ For more details circle NED-272 B8 on enclosed inquiry slip ▲

Abart SPEED REDUCERS

Designed and Constructed for Continuous Rugged Service



trouble-free, economical drives for any speed reduction need

Compact, precision built Abart units are available in a wide range of models from fractional to 168 hp. ratings, ratios to 10,000 to 1.

Worm, spur and combination gear models—single or double reduction—are supplied in 75 different types and sizes with any desired shaft arrangement.

Write today for Abart's hand pocket size speed reducer catalog.

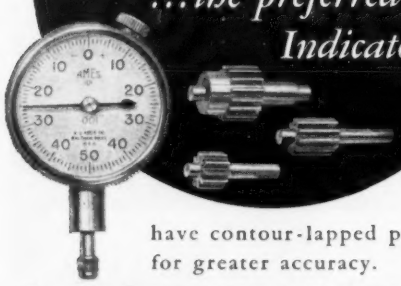
ABART GEAR and MACHINE CO.

4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

For more details circle NED-273 B8 on enclosed inquiry slip

AMEs

...the preferred Dial Indicators...



have contour-lapped pinion teeth for greater accuracy.

Because tooth form determines how well pinions mesh—Ames hardens, contour laps, and carefully inspects pinions for perfect tooth form and finish. The result: Pinions that mesh perfectly and a complete absence of "play". This extra attention to detail is typical of the Ames manufacturing approach. It helps explain why so many companies specify Ames Dial Indicators as "preferred". Write today for complete information.

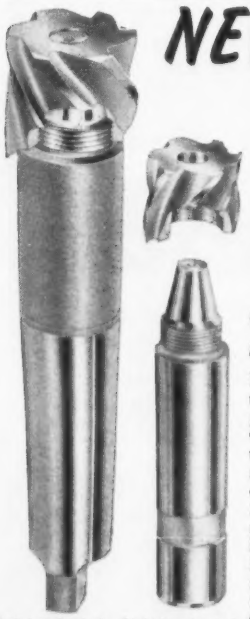
Representatives in principal cities

B.C. AMES CO.

34 Ames Street, Waltham 54, Mass.

MANUFACTURERS OF MICROMETER DIAL GAUGES • MICROMETER DIAL INDICATORS

For more details circle NED-274 B8 on enclosed inquiry slip



NEW exclusive design!

T-J REAMERS

CUT REPLACEMENT COST MORE THAN HALF!

Exclusive in design . . . the New-type T-J Reamers cut your replacement costs to *less than half!* Only the quickly installed *head* to replace, after buying original shank. Wide range of interchangeable heads from ½" to 2-3/4" inclusive, in 1/16" increments available . . . right or left hand spiral flutes. Tapered hole in head insures concentricity and *new* thread design assures a snug fit on smoothly tapered shank. Quick change of heads saves time. Head and arbor firmly locked together.

Left hand spiral, right hand cut. Right hand spiral, right hand cut.

39 Years Experience

T-J TOMKINS-JOHNSON

RIVETERS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

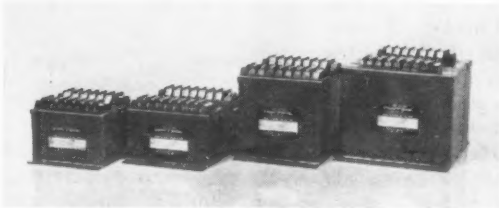
The Tomkins-Johnson Co., Jackson, Michigan

For more details circle NED-275 B8 on enclosed inquiry slip

SWITCHING REACTORS

eight models rated 15 to 300 va operate on impedance changes

Switching action is based on impedance changes in line of eight switching reactors. Multiple purpose control coils enable them to translate inputs to



plain logic operations through external connections to normal control voltages. They serve as basic control components to drive such loads as solenoid valves, motor contactors, magnetic clutches, and annunciator indicator or alarm systems. Operation is completely static.

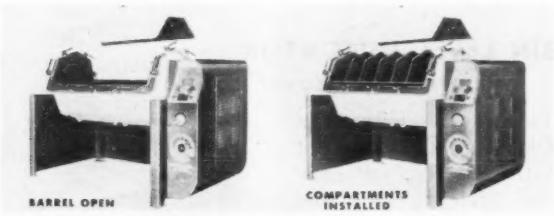
Control coils permit zero to maximum output with 20 ma of control, but each winding can withstand 80 ma. Four models with ratings of 15, 75, 150, and 300 va operate directly from nominal supply voltages, and four other models with same ratings deliver standard load voltages. Made by **Magnetics, Inc.**, Control Div., Dept. NED-3, Butler, Pa.

For more details circle NED-276 B8 on enclosed inquiry slip

FINISHING BARREL

convertible to multicompartment use for wide range of operations

This Multi-Function Fixture barrel is extremely flexible in its application to deburring, tumbling, and other finishing operations. Available in sizes up to



120 in. ID, it can be used in three different ways. For large loads, it is usable as a single-cavity unit. By inserting an optional multiple compartment type container, it provides six or more separate divisions, each capable of holding different work and finishing media.

A custom-designed holding fixture can be inserted in the barrel for finishing parts up to 118 in. long. The entire top three-panel section is removable, and cam locks and O-rings assure tight seal. Inspection doors afford access to all compartments. Features of finishing machine include Vari-Speed motor, preset start and stop timer, positive brake, and standard replacement parts. Made by **Speed-D-Burr Corp.**, Dept. NED, 3613 San Fernando Rd., Glendale 3, Calif.

For more details circle NED-277 B8 on enclosed inquiry slip

CESCO...RIGHT—BEFORE YOUR EYES!

NEW! Flexible Plastic Goggles

MEET WIDE RANGE OF INDUSTRIAL APPLICATIONS

New CESCO No. 565 Flexible Plastic Goggles

• Extremely lightweight and durable—molded from soft vinyl material—these #565 CESCO Flexible Plastic Goggles protect workers from dust, splashing liquids and moderate impact from any direction.

Comfortable to wear • They are perfectly contoured and fit snugly all around. Small perforations, angled away from the eyes, give adequate ventilation.

Give complete protection • They leave no open spaces. Fit perfectly over most personal glasses.

Permit full view • Wide window lenses are curved rather than flat to allow best vision.

Available in two styles • No. 565C (with clear plastic lens) or No. 565G (with green plastic lens).

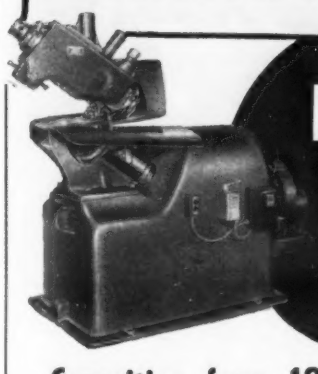
ASK your CESCO Safety Equipment Distributor to show you this new goggle and the many other goggles in the complete CESCO line

CHICAGO EYE SHIELD COMPANY
2715 West Roscoe St.,
Chicago 18, Illinois

CESCO FOR SAFETY

For more details circle NED-278 B8 on enclosed inquiry slip

MARSHALLTOWN



ROTARY THROATLESS SHEARS

Capacities from 18 Gauge to ½"
Cuts any SIZE . . . any SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

Built for extra heavy duty use. High grade tool steel cutters.

Write today for details and prices.

MARSHALLTOWN MFG. CO., Marshalltown 2, Iowa

For more details circle NED-279 B8 on enclosed inquiry slip

Would you spend pennies a year to protect a $40,000 machine tool?

C/R Way Wipers prevent scoring and abrasion of machine tool ways!

A 36-inch vertical milling machine, for instance, costs more than $40,000. The cost of protecting ways with C/R Sirvene (synthetic rubber) Way Wipers can be measured in pennies per year. In addition, C/R Way Wipers pay for themselves many times over by eliminating downtime and reducing costly master-mechanic maintenance. Precision molded for accurate fit, they wipe ways clean of dirt, chips, fine abrasives, even water emulsions. They fit flat ways, side rails, angles, columns and hydraulic rams. C/R Way Wipers are available in four types for all applications.

Lathe way badly scored through inadequate protection. C/R Way Wiper keeps mill way clear and smooth.

Write for this detailed illustrated brochure on C/R Sirvene Way Wipers.

CHICAGO RAWHIDE MANUFACTURING COMPANY
1271 Elston Avenue Chicago 22, Illinois

Offices in 55 principal cities. See your telephone book.

In Canada: Manufactured and Distributed by Chicago Rawhide Mfg. Co. of Canada, Ltd., Hamilton, Ontario

Export Sales: Geon International Corp., Great Neck, New York

SIRVENE C/R DIVISION

CHICAGO RAWHIDE

For more details circle NED-280 B8 on enclosed inquiry slip

Remember!

When you specify Mechanical Seals...

John Crane

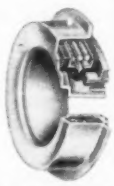
can supply the exact seal you require

You can achieve the sealing efficiency you want . . . eliminate specification problems . . . work unhampered from drawing board to production—when you work hand-in-hand with "John Crane's" experienced engineering staff and available facilities.

Get quick, finger tip information on "John Crane's" complete line of high production mechanical seals—for every conceivable service—to meet your particular needs. Send now for illustrated technical catalog. It's your's upon request.

TYPE 11-A

Pressed-in packaged unit with spring inside synthetic rubber bellows to protect against corrosion. For hot or cold water, oil, gasoline or soapy liquids . . . pressures to 35 psi . . . temperatures from —65° F. to +212° F



TYPE 6-A

Pressed-in packaged unit recommended for small shafts on hot or cold water, oil, gasoline or soapy liquids . . . pressures to 75 psi . . . temperatures from —65° F. to +220° F. Available in stainless steel or bronze.

Crane Packing Co. 6411 Oakton St., Morton Grove, Ill. (Chicago Suburb)
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

John Crane

CRANE PACKING COMPANY

▲ For more details circle **NED-281 B8** on enclosed inquiry slip ▲

Type D ROTO-CLONE

THE LOWEST PRICED DUST COLLECTOR IN ITS CLASS!

Lowest in price because of manufacturing economies resulting from producing over 20,000 Type D's (1,500 to 15,000 cfm capacity) for handling dry, granular dust.

Requires less space because ROTO-CLONE combines collector, exhauster, motor, drive and dust storage hopper in one compact, shop-assembled unit.

An outstanding performer because ROTO-CLONE'S collection efficiency is constant regardless of exhaust volumes handled!

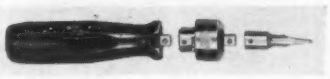
Write for Bulletin No. 272!

AAF American Air Filter COMPANY, INC.

391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle **NED-282 B8** on enclosed inquiry slip ▲

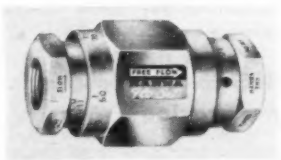
RATCHET DRIVER
has screwdriver bits, sockets



Sealed ¼-in. ratchet with fingertip reversing control, ¼-in. drive handle, and 3/16-in. slot screwdriver bit are included in the standard M-100 ratchet driver kit. Available attachments are slot screwdriver bits from 3/16 to ⅜ in. wide and from 1⅝ to 3¼ in. long; No. 1, 2, and 3 Phillips bits; six and eight-point sockets with openings from 3/16 to 9/16 in.; 2 and 5½-in. extensions; offset handle; and a universal joint. Made by **Herbrand Tools,** 101 Stone St., Fremont, Ohio.

▲ For more details circle **NED-284 B8** on enclosed inquiry slip ▲

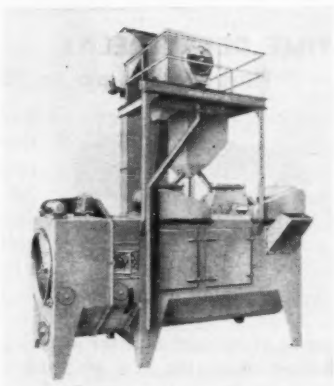
SPEED CONTROL VALVE
for 1000 psi hydraulic service



Piston speeds of hydraulic cylinders and speeds of other hydraulically operated devices are controlled by the Flo-Set 1000 valve. Rated for 1000-psi hydraulic operation, it is made in ¼, ⅜, ½, and ¾-in. sizes. When used with cylinders, valve allows the instroke and outstroke speeds to be regulated separately. Flow can be controlled from zero to desired capacity with only one revolution of the calibrated, locking, adjustment sleeve. Made by **Hanna Engineering Works,** 1759 N. Elston Ave., Chicago 22, Ill.

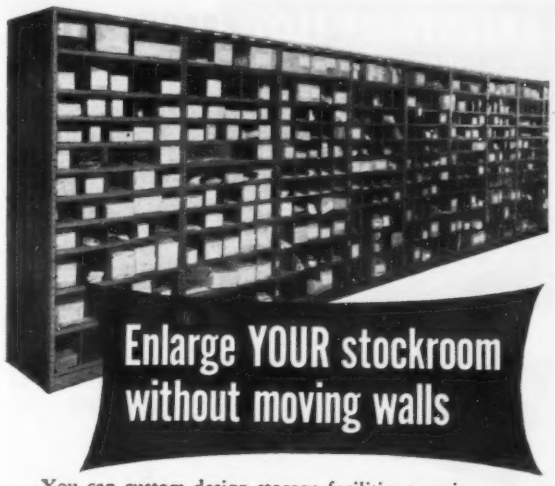
▲ For more details circle **NED-285 B8** on enclosed inquiry slip ▲

BLAST CLEANING MACHINES
tumbling type has end discharge



Blast chamber of the 26-in. continuous Tumblast cleaning machine is a full length, full diameter, endless apron conveyor. The end discharge unit handles a continuous flow of work which enters one end directly into the cleaning chamber, then passes down a chute into the discharge drum before dropping into a tote box or conveyor. Wheelabrator blast unit is located above the full 27-in. diameter of the tumbling mill, leaving the chamber unobstructed. Combination of tumbling and longitudinal travel exposes all surfaces of every part to the abrasive blast. Other continuous Tumblast sizes are 15, 36, 48, and 60 in. Made by **Wheelabrator Corp.,** 1128 S. Byrkit St., Mishawaka, Ind.

▲ For more details circle **NED-286 B8** on enclosed inquiry slip ▲



Enlarge YOUR stockroom without moving walls

You can custom design storage facilities to suit your exact needs—with Equipto Steel Shelving Units. Eliminate "dead areas" and unnecessary bulk . . . enlarge your stocking area . . . accelerate stock handling.

Available in all sizes, either open or closed . . . dividers, panels, label holders, bin fronts, and drawer sections may be added or rearranged at any time. For further details on shelving and other Equipto products write for free 16 page booklet No. 256, "Short Cuts to Greater Profits."

Equipto

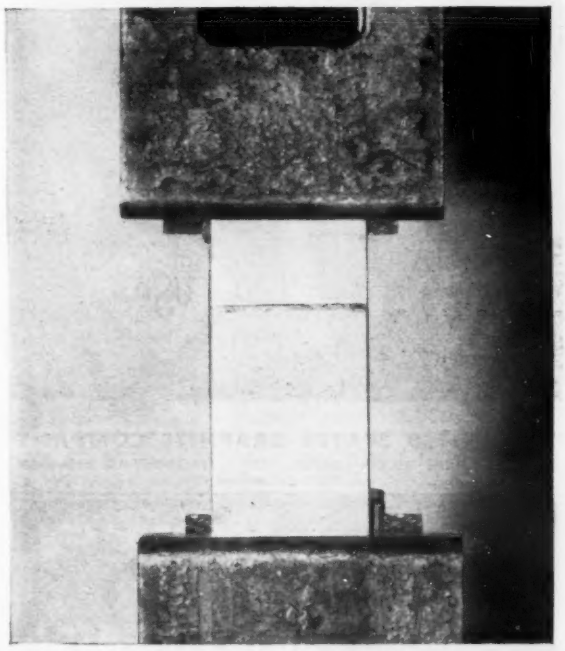
690 Prairie Avenue
Aurora, Illinois

STEEL SHELVING . . . PARTS BINS
. . . LOCKERS . . . DRAWER UNITS . . . CARTS . . . WORK BENCHES.

▲ For more details circle **NED-287 B8** on enclosed inquiry slip ▲

SUPER-BOND STEEL-TO-STEEL

to withstand a 1500 psi shear test!



Use the one adhesive that—

- Bonds "anything to anything"
- Applies easily
- Remains flexible
- Sets quickly
- Resists water, chemicals, oils and waxes
- Is immune to fungi
- Is permanent

Pliobond by GOODYEAR

Pliobond—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

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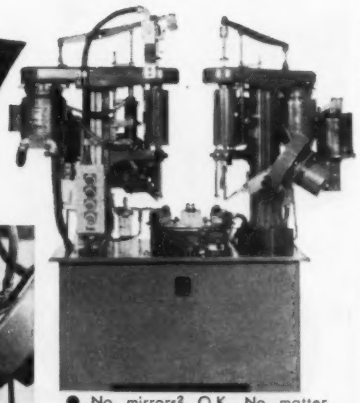
JOB NUMBER SP-9514

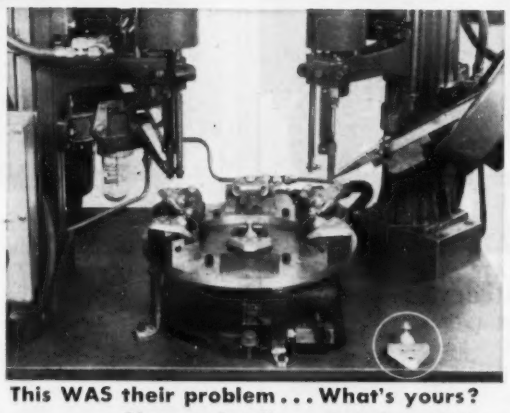
DPS "built-in" mechanical skill



● Pictured is a specially designed machine used for assembling

REAR VIEW MIRROR SWIVEL BRACKETS

The machine consists of two driving heads with automatic feeding devices with an indexing type fixture . . . The operator simply preloads the component parts of the assembly into the dial, and as the dial indexes two screws are driven into the swivel pressure plate at proper tension for adjusting the mirror.



This WAS their problem . . . What's yours? Give us details . . . Ask for catalog.

● No mirrors? O.K. No matter what you make, if there's parts to be assembled you'll find the mechanical answer in D.P.S.

POWER SCREWDRIVERS
SELECTIVE PARTS FEEDERS
SPECIAL ASSEMBLING MACHINES

specially adapted to serve your individual feeding and assembling needs at a higher production rate, lower cost, and with greater earnings.

DETROIT POWER SCREWDRIVER CO.

2819 W. FORT ST. DETROIT 16, MICH.

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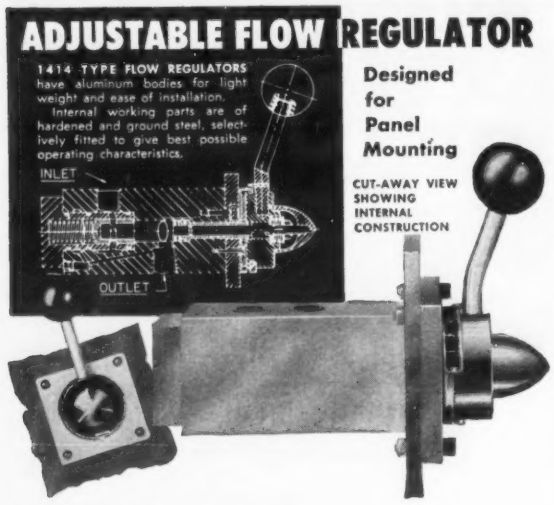
ADJUSTABLE FLOW REGULATOR



Designed for Panel Mounting

Fully adjustable from 0.5 GPM to 20 GPM. Maintains a constant rate of flow regardless of work resistance or pressure fluctuations.

Also SOLENOID VALVES, MICRONIC LINE FILTERS and CHECK VALVES.

Write for latest illustrated bulletin H

WATERMAN ENGINEERING COMPANY
725 CUSTER AVENUE EVANSTON, ILLINOIS

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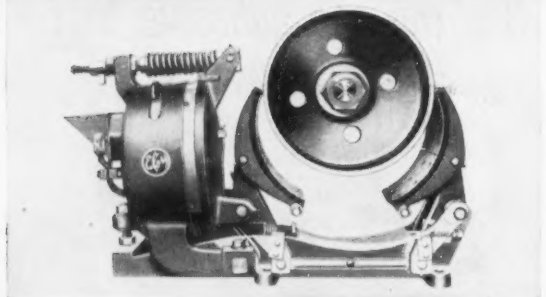
THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

▲ For more details circle **NED-290 B8** on enclosed inquiry slip ▲

EC&M BRAKES for AC and DC Motors — for LONGER LIFE, FEWER ADJUSTMENTS!



EC&M Type WB Brakes, designed to the new AISE-NEMA standards, assure long life and fewer adjustments because brake lining is thick, tough and of uniform quality throughout its entire thickness.

Manual release is standard and connecting lever below the wheel permits quick armature replacements. These brakes are 100% lubricated...dirt is flushed out.

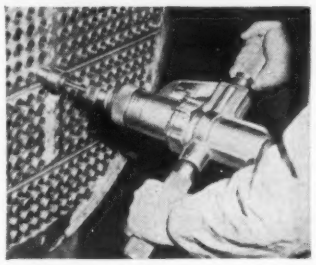
Write for Bulletins 5010–5020

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

8018-R

▲ For more details circle **NED-291 B8** on enclosed inquiry slip ▲

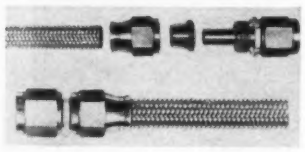
TUBE EXPANSION CONTROL assures uniform rolling action



This pneumatically operated Airetool tube expansion control unit will roll up to 12 tubes per minute. Accuracy within 0.001 in. is maintained with a precision control that measures the torque output and stops the expansion according to a predetermined setting. This results in uniformly tight tube joints. Calibrated ring on micrometer adjustment permits setting from 0.5 to 37 lb-ft, using 90-psi air pressure. Three models are available for steel and nonferrous tube sizes ranging from ¼ to 1½ in. Made by **Airetool Mfg. Co.**, 308 S. Center St., Springfield, Ohio.

▲ For more details circle **NED-292 B8** on enclosed inquiry slip ▲

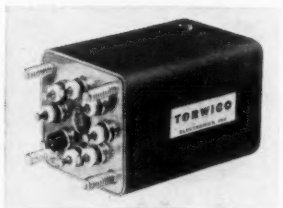
TEFLON HOSE FITTING cannot loosen by vibration



Seal - Lock reusable fitting for high temperature Teflon hose has a triple locking feature which prevents loosening from vibration. Two seals are dynamically actuated by internal pressure and a left-hand assembly prevents accidental loosening during installation. Field assembly without special tools is possible. Straight and elbow couplings in sizes from 3 to 20 are available. Made by **Resistoflex Corp.**, Dept. NED, Roseland, N. J.

▲ For more details circle **NED-293 B8** on enclosed inquiry slip ▲

TIME DELAY RELAY time delays up to 30 seconds



Tinymag miniaturized time delay relay provides precise time delays up to 30 seconds or greater, depending on actuation voltage. Normal sensitivity is 10 milliwatts dc. An instant resetting feature is optional. Absence of contact chatter at pick-up and drop-out points allows operation in a 40G shock, 20G vibration-environment. Excitation required for the relay unit is 115 v rms, 400 cps. Other ratings are available. Contacts are rated at 2 amp resistive and in configurations up to double-pole double-throw. Hermetically sealed case is 1 5/16 x 1 5 /16 x 2¼ in. and operating range is −55 to 100° C. Made by **Torwico Electronics, Inc.**, Dept. NED-1, 1090 Morris Ave., Union, N. J.

▲ For more details circle **NED-294 B8** on enclosed inquiry slip ▲

make hardness tests ANYWHERE WITH THE **NEWAGE TESTER**

- CLAMPS, JAWS & BASE PLATE ARE ELIMINATED
- NO CONVERSIONS OR CALCULATIONS
- TEST ANY SIZE, SHAPE OR TYPE METAL
- NO SKILL REQUIRED
- SCALE READINGS IN ROCKWELL & BRINELL
- ACCURACY GUARANTEED

Many thousands used by industry and government. Write, wire or call for additional details and prices.

NEWAGE INDUSTRIES, INC.
222 York Road *Jenkintown, Pennsylvania*
TUrner 4-8494 *Dept. N.E.D.*

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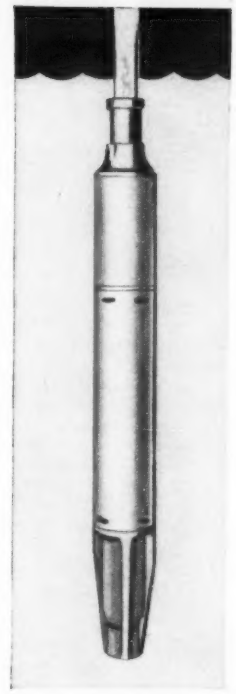


Need a submersible motor for your product?

Call Jack & Heintz — America's leading specialists in *Customized* motors (⅓ to 15 hp in submersible models). We'll give you a motor that'll operate in water, oil, gasoline and other fluids...a motor that electrically, mechanically and physically fits your submersible pump design perfectly.

We can stretch a motor tall, squat it flat, customize it for ambient rating, and still keep costs reasonable.

So let us design a motor for your product. We'll fit a motor to it that will make your product perform the way you want it to... look as good as it should... last as long as you say it will... and sell faster because of it.

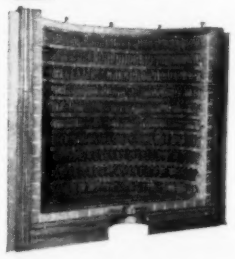
For ratings and performance data, write for Bulletin No. 9.1. Jack & Heintz, Inc., 17629 Broadway, Cleveland 1, Ohio.

JACK & HEINTZ
CUSTOMIZED ELECTRIC MOTORS

▲ For more details circle **NED-296 B8** on enclosed inquiry slip ▲

POSITIVE TEMPERATURE CONTROL — No Over-Heat! TRENT "HIGH-TEMPERATURE" JACKETS with TRENT "Folded-and-Formed" Heating Units

Only TRENT "Folded-and-Formed" ribbon type resistor heating element provides controlled, uniform radiant heat up to 2000°F. ... the greatest radiating surface per square inch of element cross section of any electrical heating element! And only TRENT Heating Jackets offer these design advantages to assure efficient processing operations wherever high-temperature radiant heat with positive control is essential.



- Temperatures to 2000°F. without Pressure Equipment
- Maximum Heat Input
- "Double-Boiler" type Unit and Chamber Control
- Heat Zone Control—either Manual or Automatic
- Brick Insulation or Appropriate Low Temperature Insulation Depending on Operating Requirements
- All-Welded Internal Connections
- Rapid Heat Decline after Unit is De-energized
- Maximum Element and Jacket Life —Minimum Maintenance

Let an experienced Trent Heating Engineer show you how Trent "High-Temperature" Jackets with Trent "Folded-and-Formed" Heating Units can mean trouble-free controlled heat for the kettles, tanks, autoclaves and similar process vessels you use or design. Or write for Bulletin 72-E.

Trent Representatives in Principal Cities Coast to Coast

TREN INC.
Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILA. 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

▲ For more details circle **NED-297 B8** on enclosed inquiry slip ▲

You Can Hold Temperatures plus or minus 1/2° F. with existing temperature control

GORDON XACTLINE

All the advantages of such precision temperature control can be yours—with your present pyrometer control—simply by adding a Gordon Xactline to your control circuit. Hundreds of applications prove its reliability.

Xactline is entirely electrical—not mechanical. Operation is sure and quick permitting on-off cycle as short as three seconds. It's automatic, too, no adjustments or coordination are ever needed. And, the installation is easy—you can do it yourself. The compact unit can be placed anywhere that is convenient, flush or wall mounted, and only six connections are required to place the instrument in operation. Why not look into its possibilities for you, today

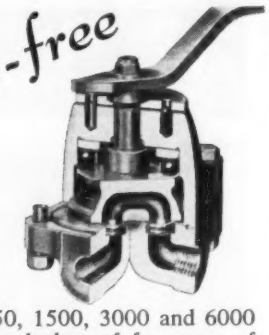
Ask for Xactline Bulletin.

6208

CLAUD S. GORDON COMPANY
Manufacturers • Engineers • Distributors
621 West 30th Street, Chicago 16, Illinois
2013 Hamilton Avenue, Cleveland 14, Ohio

▲ For more details circle **NED-298 B8** on enclosed inquiry slip ▲

LONG *maintenance-free* SERVICE



Manual Shear-Seal valves (250, 1500, 3000 and 6000 P.S.I.) are leakproof and stay leakproof for years of service with little or no maintenance; no internal port to port leakage in the detented positions and, of course, no external leakage. Sealing qualities actually improve with use, due to wear compensating lapping action of "Shear-Seals."

You get excellent throttling, smooth action to any degree of flow without fighting the fluid pressure.

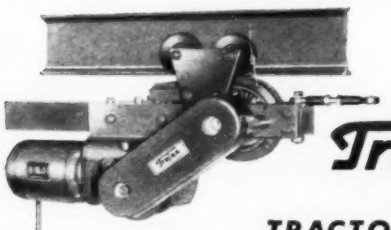
Quick as a quarter turn of the handle you can open the full flow (or shut it off) with surge dampening action, because the round tubular passages have no spools or poppets obstructing flow.

BARKSDALE VALVES

5125 Alcoa Avenue, Los Angeles 58, California

Ask for bulletin 5-H, -A and -W.

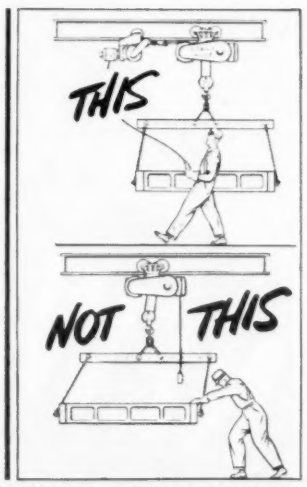
For more details circle NED-299 B8 on enclosed inquiry slip



Trojan

TRACTOR for POWER TRAVEL

Proven Money Saver In Hundreds of Instances. Ask for Trojan Tractor Bulletin 833



Make your hand pushed hoists and cranes power traveled. Eliminate slow pulling and pushing drudgery. Speed up handling, save time, increase production, reduce costs. Simply attach a Trojan Tractor; inexpensive, quick delivery. Order one today.

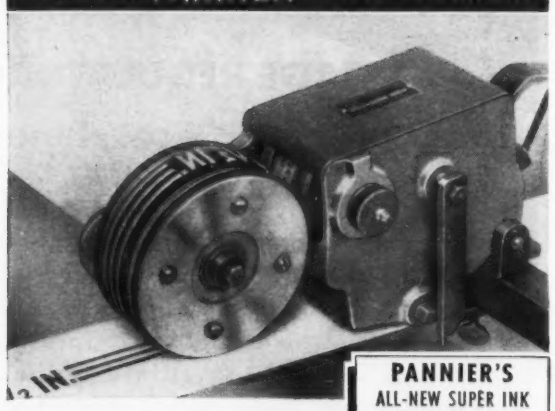
DETROIT HOIST & MACHINE CO.

Designers and Manufacturers of Hoists and Cranes since 1905

8214 Morrow St., Detroit 11, Mich.

For more details circle NED-300 B8 on enclosed inquiry slip

ANOTHER *PANNIER* MASTER MARKER!



PANNIER'S ALL-NEW SUPER INK PRINT-ALL

Internally fed unit.
Use inks from semi-paste to liquid, including light colored, heavy pigmented inks.
Continuous or repeat printing.
No stopping to add ink.
Print on 1" centers with multiple staggered units.

Super Ink Print-All clearly marks all conveyed materials traveling horizontally or vertically. It prints top or bottom surfaces as material moves under or over the printer.

Write for complete data.

BIRTHMARKED MATERIALS

MARKING DEVICES — MASTER PANNIER MARKERS

THE PANNIER CORPORATION

301 Pannier Building • Fairfax 1-5185 • Pittsburgh 12, Pa.
Offices: Los Angeles • Chicago • Cleveland • Philadelphia

For more details circle NED-301 B8 on enclosed inquiry slip

TRACTOR-LOADER

1 ¾ cu yd model has 4-wheel drive, three forward and reverse speeds

Interchangeable buckets available for the W-9 Terraload'r tractor-loader are 1⅜ cu yd (heaped) heavy duty digging, 1¾ cu yd standard material, and 2¾ cu

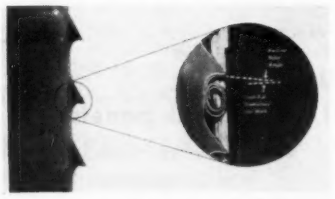
yd light material types. The four-wheel drive, rear-wheel steer vehicle has a forward reach of 62½ in. at a 7-ft dump height. A sight leveling gage facilitates setting the bucket at level or predetermined digging position before it reaches the ground.

Independent differential in each axle insures equal power to all wheels at all times. Tractor is powered by a 251-cu in. Case industrial engine, either gasoline or diesel, equipped with a Torqmatic drive. Three forward and reverse speed ranges provide 0 to 21 mph speeds. Hydraulic bucket lift capacity is 5500 lb. Overall length is 18 ft 5 in. Made by **J. I. Case Co.**, Dept. NED, Racine, Wis.

For more details circle NED-302 B8 on enclosed inquiry slip

SAW BANDS

disposable carbon steel and high speed steel types cut rapidly



Forward - slanting tooth face or positive rake of Claw Tooth saw bands effectively distributes stresses and makes possible maximum penetration with a minimum of feed pressure. Positive rake teeth have a long cutting life as they penetrate and take a chip easily. Super hard edge Claw Tooth disposable carbon steel saw band rapidly cuts moderately tough, ferrous metals, and a wide range of nonferrous materials, plastics, and wood. Band is offered for all types of vertical and horizontal band sawing machines in seven widths from ¼ to 1½ in. and in pitches of 2, 3, 4, and 6 teeth per inch.

Demon high speed steel Claw Tooth saw band is capable of long flexing over the carrier wheels of a band machine. It retains its hardness at 1100° F and can be run at high speeds. This style will cut titanium alloys, Ampco bronze, stainless steels. Six widths from ¼ to 2 in. and four pitches are offered. The 1-in. width is offered in three gages. Made by **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

For more details circle NED-303 B8 on enclosed inquiry slip

DIAL FEED PARTS with Bellows ROTARY WORK FEEDERS

With Bellows Rotary Work Feeders you can load at one station, unload at another while work is done at a third station. Fast, accurate, locked positioning. Air-powered, electrically controlled. 10" and 22" diameter table tops.

Write for Bulletins RT-1022A and RT-1326A describing Bellows Rotary Work Feeders and Index Tables. Free on request. Address Dept. NED-258.

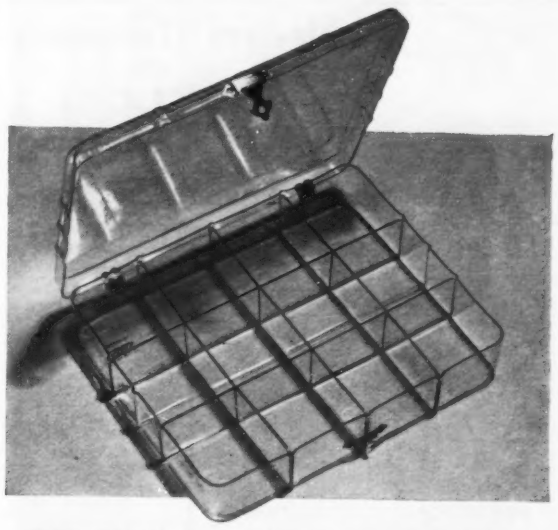
1012-B

The Bellows Co.

DIVISION INTERNATIONAL BASIC ECONOMY CORPORATION

AKRON 9, OHIO

For more details circle NED-304 B8 on enclosed inquiry slip



HIGH VISIBILITY—RUGGED CONSTRUCTION

Lite-TUFF boxes are made from clear, rugged Tenite II and have stainless steel hinges. Standard boxes available in many sizes and compartment arrangements. Uses innumerable!

Send for Plot Plan Sheets which show specifications of Standard Boxes.

SHOE FORM CO. INC.

Auburn, New York

For more details circle NED-305 B8 on enclosed inquiry slip

today's most "able" HAND TYPE CLEANER by IDEAL

• VACUUMS
• BLOWS • SPRAYS
• DRIES*

HEAVY DUTY MODEL. Medium and Light Duty models also available.

Capable . . . Delivers efficient, economical, all-around service — whether you use it as a vacuum, blower, sprayer or drier*. Cast aluminum housing, streamlined and light in weight, makes possible long, continuous use without operator fatigue.

*Heater Nozzle available for Light Duty Model only.

Durable . . . Outlives lesser cleaners because it is ruggedly built to withstand the roughest industrial use. Heavy Duty 1⅓ H.P. motor, air-cooled for extra long life, blows at a velocity of 26,500 feet per minute.

Adaptable . . . Economically converts to Tank Type cleaner in less than a minute. Choose from either of two Conversion Packs:

1. TANK CONVERSION PACK

Multiply the usefulness of IDEAL'S Heavy and Medium Duty Hand Type Cleaners by converting to a powerful, all-purpose STANDARD Cleaner. Conversion Pack consists of wheel-mounted 12-gallon steel tank and large dust-tight bag.

2. 55-GALLON DRUM CONVERSION PACK

For IDEAL'S Heavy Duty Hand Type Cleaner. A Conversion Pack consisting of (1) cast aluminum cover and (2) dust bag; and your own 55-gallon drum, gives you a "king-size" industrial tank type cleaner. Four-wheel dolly optional.

Sold Through America's Leading Distributors
In Canada: Irving Smith, Ltd., Montreal

IDEAL INDUSTRIES, INC.
1032-B Park Avenue, Sycamore, Illinois

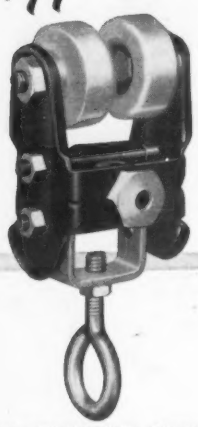
Please send me full catalog data on IDEAL'S Hand Type Cleaners and Conversion Packs.

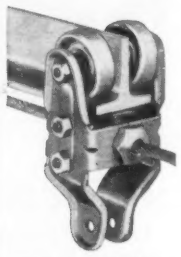
Name_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-306 B8 on enclosed inquiry slip

Tipp "Cable-Way" Conveyors with NYLON WHEELS

EXPLOSION-PROOF
NO LUBRICATION
QUIET





TIPP "Cable-Way" overhead conveyor systems with steel wheels also available.

FOR EXPLOSIVE CONDITIONS: Nylon wheels are installed in non-sparking bronze trolley side plates.

FOR CLEAN, QUIET OPERATION: In non-hazardous atmospheres, the nylon wheels are furnished in steel trolleys. Nylon wheels are almost noiseless — require no lubrication.

TIPP MANUFACTURING CO.
TIPP CITY 7, OHIO

INVENTORY IN MOTION WITH . . . Tipp . . . A FULLY ENGINEERED PRODUCT

For more details circle NED-308 B8 on enclosed inquiry slip

TO INCREASE PRESS EFFICIENCY

MINSTER CLUTCHES FOR PRESS CONVERSIONS

MINSTER Combination Air Friction Clutch and Brake — made by a press manufacturer who knows your problems.

Here's why it is profitable to convert to Minster Clutches:

- Eliminates down time because of clutch failure
- Reduces maintenance by eliminating costly and frequent parts replacement
- Increases die life because of smooth, shock-free clutch engagement
- Reduces operator fatigue and improves safety because press is easier to operate, easier to control
- More productive cycles per hour on single cycle operation
- Easier, more rapid die setting

Bulletin CC 57 describes Minster Clutches for press conversion. Copy by request on company letterhead.

THE MINSTER MACHINE COMPANY
MINSTER, OHIO

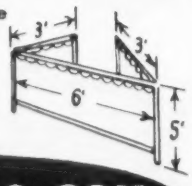
For more details circle NED-309 B8 on enclosed inquiry slip

WELDING SCREENS

PROTECT *MERCHANDISE AND PERSONNEL*

Work needn't stop for welding with these safe, lightweight, portable screens. Shield merchandise and other workers from welding.

- Treated Canvas, Asbestos or Neoprene
- Flame, Water, Weather and Mildew Resistant
- Nominal Cost—Based on Size
- Hinged for Portability
- Eyelets Hold Curtains in Place
- Curtains Easily Removed or Replaced



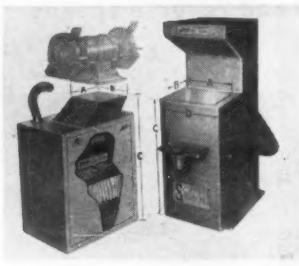
Protect merchandise with Folding Loading Dock Covers. Stock sizes and specials.

A. MAMAUX & SON
120 BOULEVARD OF THE ALLIES
PITTSBURGH 22, PA. PHONE COURT 1-3500

Tarpaulins . . . 100,000 Square Feet in Stock

For more details circle NED-310 B8 on enclosed inquiry slip

DUST COLLECTORS mount standard bench grinders



These pedestal-cabinet Grinder - Air - rester conversion type dust collectors serve as mounts for various models of bench grinders. Unit at left will take 7, 8, or 10-in. grinders, while unit at right has capacity for two 12-in. or two 14-in. 2 or 3-hp machines. Both have self-contained motor driven dust collecting fan, efficient filtering units, and removable dust collecting drawers. Made by **Standard Electrical Tool Co.**, 2488 River Rd., Cincinnati 4, Ohio.

For more details circle NED-311 B8 on enclosed inquiry slip

ULTRASONIC CLEANER 1-gal unit averages 50 w output

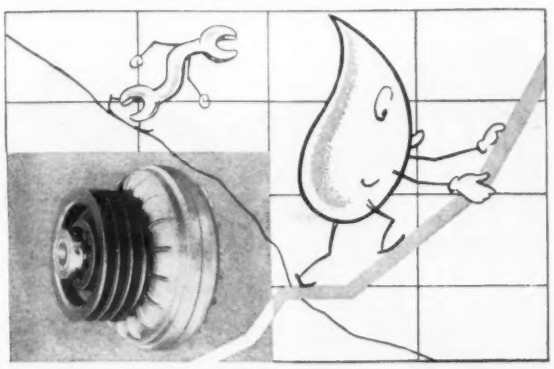
Hard-to-clean objects and intricately assembled parts can be quickly cleaned in the Hermes Sonic portable ultrasonic cleaning unit. It consists of a generator with built-in timer, tuning knob, and visual control, and a stainless steel 1-gal capacity tank with three transducers. Generator produces 50 w average output with peak of 200 w. Unit is also effective for degreasing, decontamination, removal of excess flux, mixing, and emulsifying. Made by **Hermes Sonic**, Dept. 10, 13-19 University Place, New York 3, N. Y.

For more details circle NED-312 B8 on enclosed inquiry slip

ELECTRICAL PLUG & JACK for 1/32 to 3/16 in. thick panels

Perfect electrical connection is assured by this plug and jack because gripping power is maintained by compression spring used with a floating key. Assembly is designed for quick, tight patch work on panel boards. Jack is offered in shank lengths for panels from 1/32 to 3/16 in. thick. Plug is available with either red or black nylon jacket insulation, or uninsulated. Pin length is 13/64 in. and body, 3/4 in. Plug will accept up to No. 20 wire for mechanically crimped connection. For solder connection, solder can be added through window provided. Made by **Cambridge Thermionic Corp.**, 472 Concord Ave., Cambridge 38, Mass.

For more details circle NED-313 B8 on enclosed inquiry slip



performance goes up . . .
maintenance goes down . . .
when the drive is through fluid!

There is no metal-to-metal contact to transmit destructive shocks and vibrations when you use Twin Disc Hydro-Sheave® Drives. There are other "plus" values, too: they provide "fluid drive" in a package that slips right over the motor shaft . . . they reduce motor starting demands . . . protect against overloads and shock loads . . . prevent stalling and motor burn-outs . . . permit smallest size motors . . . provide smooth, fast acceleration. Hydro-Sheave Drives are available at all nominal motor speeds . . . to 50 hp. Fluid Couplings: to 850 hp.

TWIN DISC
Fluid Couplings

TWIN DISC CLUTCH CO. · Racine, Wisconsin

For more details circle NED-314 B8 on enclosed inquiry slip

DON'T BUY INFRA-RED OVENS *Blindfolded*

driQuik *brings* FIELD TEST EQUIPMENT *right into your plant*

Don't buy blindly from a catalog. Our laboratories are equipped to make any tests that you wish, but we believe it important to have one of our highly trained representatives bring test equipment into your plant so that you can see exactly what it will do with your products and your personnel. No charge or obligation for this service which *only* driQuik provides.

See—through a test in your plant—how temperature is controlled accurately at any level you wish by driQuik. See how you get an even field of heating energy. No bulbs or sockets to burn out.

driQuik DIVISION
DRY CLIME LAMP CORP.
GREENSBURG, INDIANA

For more details circle NED-315 B8 on enclosed inquiry slip

NEW Dockson DUBLCHECK

A TWO-STAGE REGULATOR for Oxygen or Acetylene

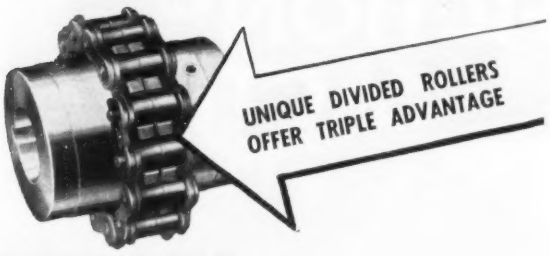
A Dockson safety engineered product. Best quality materials and workmanship throughout. Preset, automatic first stage assures accurate secondary pressure from full to empty tank. Spring-loaded, self-closing safety valve. Forged brass body and bonnet. Filtered inlet. Precision, interchangeable parts. No special tools needed.

Write for complete-line Welding Catalog and name of nearest distributor.

Dockson CORPORATION
3839 WABASH AVENUE
DETROIT 8, MICHIGAN

For more details circle NED-316 B8 on enclosed inquiry slip

For reliable shaft connections . . .



LINK-BELT "RC" flexible couplings

Simplicity . . . low cost . . . dependability—Link-Belt "RC" flexible couplings offer these important design and performance benefits. Unique divided roller assures equalized load . . . proper balance at high speed . . . effective compensation for shaft misalignment. These all-steel couplings are precision-made and hardened for long life. They're stocked in a wide range of sizes, and are available for shafts up to 12 inches.

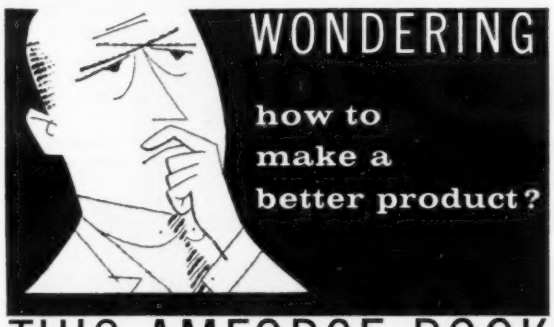
Write to LINK-BELT COMPANY, Dept. N.E.D., Prudential Plaza, Chicago 1, Ill., for Folder 2363.

14,488

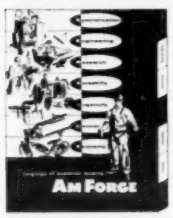
LINK-BELT

"RC" FLEXIBLE COUPLING

▲ For more details circle **NED-317 B8** on enclosed inquiry slip ▲



THIS AMFORGE BOOK may help you



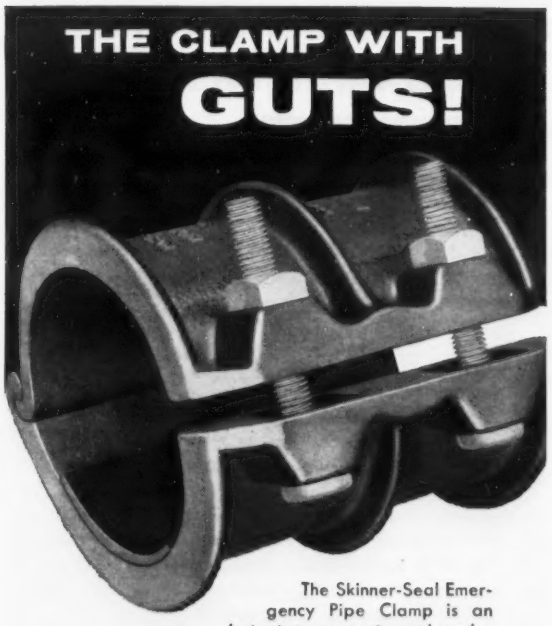
If you buy or specify forgings, write for this fact-packed AmForge book. Its 16 pages show how your company can benefit from better AmForge research, engineering and control. You'll see that all this adds up to the kind of "service" you need for production quality and economy. Either circle the number on the magazine service card or write AmForge, Dept. NED2, 157 North Wacker Drive, Chicago 9, Illinois.

AMERICAN Brake Shoe COMPANY

AMFORGE DIVISION

▲ For more details circle **NED-318 B8** on enclosed inquiry slip ▲

THE CLAMP WITH GUTS!

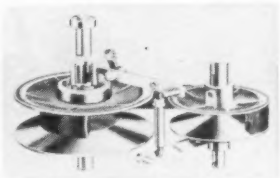


The Skinner-Seal Emergency Pipe Clamp is an instant, permanent repair under any operating condition. No pressure too high. Anyone can apply in a few moments. Made in all sizes, ½" to 12", for steel and C. I. pipe. Carried in stock by 1300 industrial distributors!

M. B. SKINNER CO., South Bend 21, Ind.—Established 1898

▲ For more details circle **NED-319 B8** on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE for 4600 to 1.2 rpm speeds



Augmenting the present line of Speed-Trols, this Model W mechanical variable speed drive is offered in sizes to give infinitely variable speeds from 4600 to 1.2 rpm in speed variations of 2:1 to 10:1. Speed change is accomplished with ribbed V-belt and dual variable pitch pulleys mounted on parallel shafts. Speed change can be selected by manual, semiautomatic or fully automatic controls. Integral and separate motor constructions are available on these units which can be mounted in any position. Made by **Sterling Electric Motors, Inc.,** Dept. NED, 5401 Telegraph Rd., Los Angeles 22, Calif.

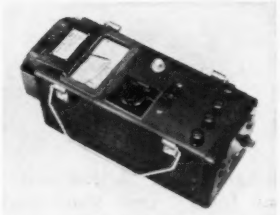
▲ For more details circle **NED-320 B8** on enclosed inquiry slip ▲

PROXIMITY DETECTOR for counting, warning, gaging uses

Within limits, the Model 6120 proximity detector will detect a 1/16-in. change in position of metallic parts. Designed for sorting and counting, it can also be used for limiting, warning, process control, and gaging when used with a Model 6330 controller. Response rate is 400 metallic or nonmetallic parts per minute. Output is nominally 5 v dc across a 5-megohm load. Metallic material within ½ in. of the detector's face produces a 15 per cent signal. Unit is 4½ in. long by 2½ in. diameter. Made by **Autron Engineering, Inc.,** 1254 W. Sixth St., Los Angeles 17, Calif.

▲ For more details circle **NED-321 B8** on enclosed inquiry slip ▲

LOW RESISTANCE OHMETER direct reading, four-scale models



Accurate measurements down to 10 micro-ohms are directly read on the 3¼-in. scale of the Megger low resistance ohmmeter. Self-contained battery or rectifier-operated models have four ranges for resistance measurements of electrical conductors, joints, contacts, and windings in oil circuit breaker assemblies, rotating electrical equipment, transformers, and coils. Rectifier operated model plugs into any 115 v, 50-60 cycle outlet. Size is 13 x 6 x 7 in. and weight is 10 lb. Made by **James G. Biddle Co.,** Dept. 24-46-22, 1316 Arch St., Philadephia 7, Pa.

▲ For more details circle **NED-322 B8** on enclosed inquiry slip ▲

SEND US YOUR MEASUREMENTS AND WE'LL CUSTOM DESIGN IT FROM . . .

FLEXIBLE PLASTIC

IT can be almost anything fabricated from flexible plastic . . . covers, waterproof containers, wrappers, portfolios, merchandising devices . . . *YOUR MEASUREMENTS* can be very diverse. Perhaps the material needed is transparent, translucent, opaque or colored — thick or thin. We can add zippers, slide or snap fasteners, or grommets. The seams can be stitched or electronically welded. We've done just about everything in all kinds of sizes with strong, durable, flexible plastic. We'd be happy to work from your specifications . . . so send us your measurements, and we'll custom design *IT*.

POLO PLASTICS CO.

Dept. 44, 1718 N. 1st ST., MILWAUKEE 12, WIS.

Write for free Polo Plastics Swatch Chart

▲ For more details circle **NED-323 B8** on enclosed inquiry slip ▲

FREE LATEST STAYNEW FILTER INFORMATION

Pipe Line Filter Bulletin 200

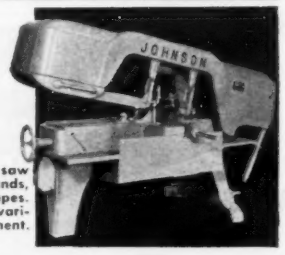
Tells how Dollinger exclusive "Double Action Principle" removes all dirt, rust, or other foreign matter in air or gas lines at pressures to 10,000 psi. Gives data and specifications on all models.

Call your local Dollinger representative or write Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

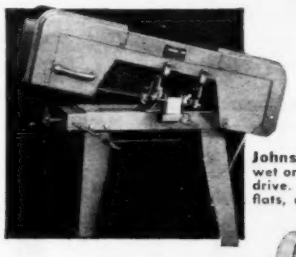
PROTECTO-WRAPPER STAYNEW FILTERS **DOLLINGER**

FILTERS FOR EVERY INDUSTRIAL NEED

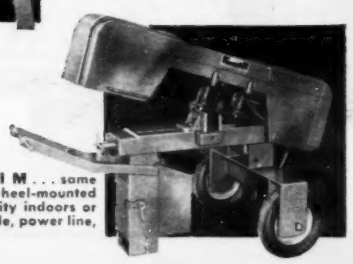
▲ For more details circle **NED-324 B8** on enclosed inquiry slip ▲



Johnson Model J . . . A big, rugged saw that cuts anything—anywhere! 10" rounds, 18" flats, heavy structurals and odd shapes. Available in wet or dry cutting models, variable speed drive and optional equipment.



Johnson Model B . . . Also available in wet or dry cutting models, variable speed drive. Will easily handle 5" rounds, 10" flats, odd and irregular shapes.



Johnson "Mobile" Model M . . . same capacity as Model B, but wheel-mounted for fast, easy maneuverability indoors or out. Has self contained handle, power line, tool box for accessories.

MORE SAW for LESS MONEY

Only Johnson offers so much saw for so little money. Whether your requirements call for the tremendous performance of the big Model J, the amazing Model B, or the versatile "Mobile" Model M, there's a Johnson saw model, wet or dry, to match your metal cutting needs.

Remember . . . Johnson offers three husky, handsome models that'll do the job faster, better. They're beautifully engineered, semi-automatic, have centralized controls—plus many exclusive features that pay production dividends to *you!*

Priced right? Certainly! Compare them all before you buy and you'll agree, Johnson offers more saw for less money.

Write today **. . . Ask for illustrated literature, specifications and prices on the full line of Johnson saws. Ask the man who has one . . . You'll be glad you did!**

Eastern Distributor
R. J. R. KELLY CO.
Hale Bldg., 51 Main St.
East Orange, N. J.

Midwestern Distributor
W. Q. LUNDMARK
75 N. Broadway
Des Plaines, Ill.

Western Distributor
HASTINGS DISTRIBUTORS
1605 Solano Avenue
Berkeley, Calif.

JOHNSON MANUFACTURING CORPORATION
Barnes & Taylor Sts., Albion, Michigan

Johnson METAL CUTTING BAND SAWS

▲ For more details circle **NED-325 B8** on enclosed inquiry slip ▲

ATTEND THE 1958
ASTE TOOL SHOW
CONVENTION CENTER • PHILADELPHIA • MAY 1-8

SEE all the very latest advances and improvements in more than thirty major categories of industrial products.

ATTEND top-level conferences, conducted by recognized authorities on the newest production techniques and developments.

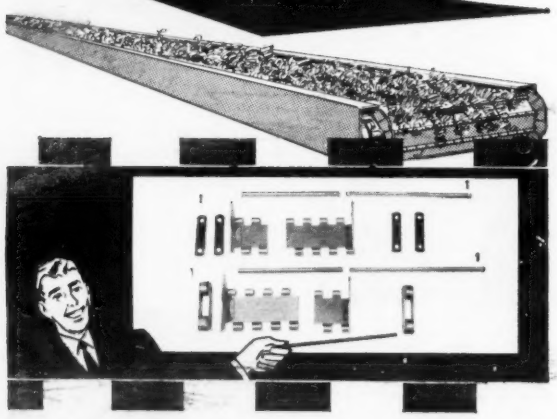
MEET and exchange ideas with management, engineering, production, sales people from the nation's leading industrial concerns.

INSPECT the modern equipment and up-to-the-minute manufacturing methods being utilized in booming Delaware Valley plants.

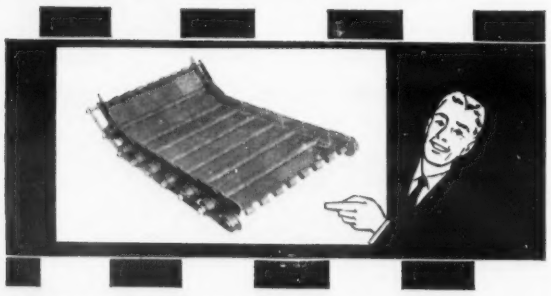
AMERICAN SOCIETY OF TOOL ENGINEERS
TOOL SHOW CONFERENCE '58 MAY 1 TO 8

For more details circle NED-326 B8 on enclosed inquiry slip

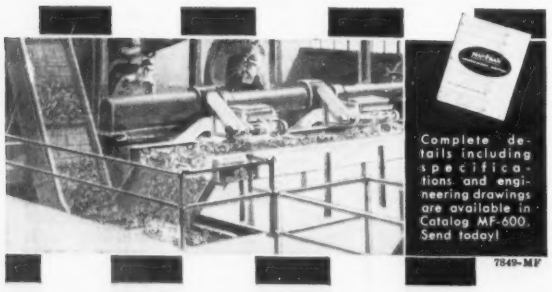
HERE'S A STEEL HIGHWAY FOR YOUR SCRAP TRAFFIC



May-Fran Hinged-Steel Belting is assembled from mass-produced components to form a materials handling belting of almost any width,



length or contour to meet individual specifications. Links are joined by means of steel rods . . . links, wings and side chain become integral unit.



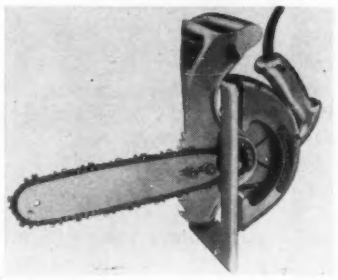
MAY-FRAN HINGED-STEEL BELTING GIVES YOU PRODUCTION SAVINGS THROUGH SCRAP HANDLING EFFICIENCY

Precision formed steel links are assembled in horizontal rows and joined by high-carbon steel tubes and connecting rods. These rods are fastened to side chains to support the belt links so they "float" freely, and side chain takes all tension. Wings remain positively engaged and in continuous overlap at all times, even over sprockets.

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Rd., Cleveland 12, Ohio

For more details circle NED-327 B8 on enclosed inquiry slip

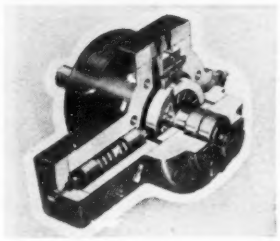
CHAIN SAW ATTACHMENT
adapts hand saw for timber cutting



Attached on either a No. 73 or 83 circular type power hand saw, this chain saw assembly converts it into a hand tool for such operations as cutting timber, firewood, and structural lumber. Wide aluminum shield and instant trigger release switch contribute to safety. Tool is particularly suited for deep pocket cutting, notching, and felling. It will cut 18-in. diameter trees or logs in one pass, as well as up to 10-in. wide stacked, dressed lumber. Made by **Black & Decker Mfg. Co.,** 762 E. Pennsylvania Ave., Towson 4, Md.

For more details circle NED-328 B8 on enclosed inquiry slip

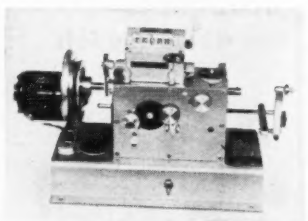
VARIABLE VOLUME PUMP
for hydraulic circuit power uses



A flexible source of hydraulic circuit power for a variety of machine applications, Model S variable volume vane-type pump delivers 10 gpm. It is designed to operate at 1000 psi and 1800 rpm. Pump is subplate mounted and simple in design. Made by **Racine Hydraulics & Machinery, Inc.,** 2089 Albert St., Racine, Wis.

For more details circle NED-329 B8 on enclosed inquiry slip

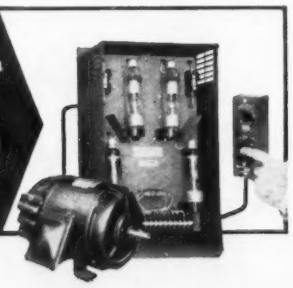
BOBBIN WINDERS
gear changing is not required



Gear changing or frequent cam substitution is not required on Model CX and CXS bobbin winders which have a continuously variable transmission to control traverse rate with standard adjustable cam. Adjustment of wire feed is made without tools. One knob regulates wire spacing from about 10 to 500 turns per layer, a second knob adjusts traverse lengths, and a third control knob centers the winding between coil flanges. Wire spacing is adjusted for desired lay, and dial setting may be recorded. Setting of cam throw to within 0.001 in. is possible. All internal moving parts operate in an oil bath. Reset counter controls number of turns. Made by **Coil Winding Equipment Co.,** Oyster Bay, N. Y.

For more details circle NED-330 B8 on enclosed inquiry slip

V★S JR. CHANGES DRIVE MOTOR SPEEDS



Available from ¾ hp. to 4 hp., the Reliance V★S Jr. operates from single phase a-c. power. Any motor speed from 290 rpm. to 2300 rpm. may be accurately selected by turning a dial.

Operator's control station, located for convenience and efficiency, has start, stop, run, jog buttons and speed selector.

Also available — dynamic braking, reversing.
D-1674

$762.00 List price—¾ hp. model, 220 or 440 v a-c. Includes control unit, operator's station and drive motor.

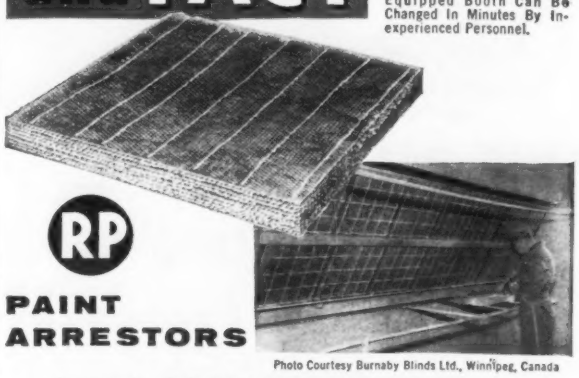
RELIANCE ELECTRIC AND ENGINEERING CO.
DEPT. 242A, CLEVELAND 17, OHIO
Sales Offices and Distributors in principal cities

For more details circle NED-331 B8 on enclosed inquiry slip

FICTION and FACT

FICTION: Paint Overspray Control Requires Complicated and Expensive Maintenance Procedure.

FACT: An RP Paint Arrestor Equipped Booth Can Be Changed In Minutes By Inexperienced Personnel.



RP PAINT ARRESTORS

Photo Courtesy Burnaby Blinds Ltd., Winnipeg, Canada

Inexpensive R P Paint Arrestors are easily replaced in a short time to provide like-new paint overspray removal efficiency, with minimum down-time, at a fraction of usual maintenance costs. Economical original installation, too—and adaptable to almost every type operation, R P Paint Arrestors can cut costs, increase production in your booths, too. Write for information.

Products of Research

RESEARCH PRODUCTS Corporation
Dept. 36, Madison 10, Wis.

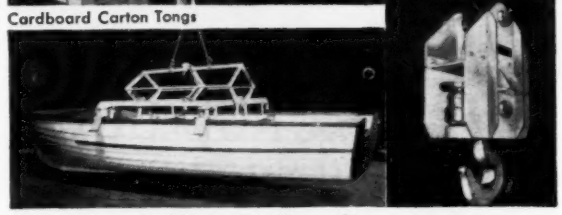
For more details circle NED-332 B8 on enclosed inquiry slip

Lifting problem? Transfer problem?

Double "C" Hook Pallet Lifter

Motorized Rotating Crane Hook

Cardboard Carton Tongs



Automatic Tongs for Objects of All Shapes, Sizes

If it hangs from a crane . . .

HEPPENSTALL CAN HANDLE IT

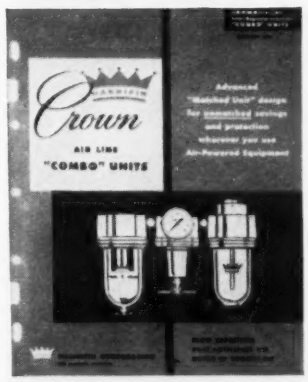
Eliminate production bottlenecks—Heppenstall Tongs speed work from one operation to the next, hold it at advantageous working angle, carry finished products to shipping or storage areas. *Conserve space*—Heppenstall Tongs permit close, high stacking of raw materials and finished inventory with minimum aisle space.

Send today for additional information on Tongs for every lifting operation, or tell us your special problem and we'll help you with custom designs.

HEPPENSTALL COMPANY
501 Sixteenth Street, New Brighton, Pa.

For more details circle NED-333 B8 on enclosed inquiry slip

Insure top performance of air-powered equipment



with CROWN

- ***Filters***
- ***Regulators***
- ***Lubricators***

WRITE FOR BULLETIN 300

Wherever you use air for power—in air tools or air cylinders—"Matched Unit" combinations of Hannifin's new CROWN line of filters, regulators and lubricators will protect valves, tools, cylinders, etc., better—with far less loss of power. Bulletin 300 will give you the story at a glance. Complete Crown stocks in most principal industrial areas.

HANNIFIN
Hannifin Company, 527 S. Wolf Road, Des Plaines, Illinois
FILTERS • REGULATORS • LUBRICATORS

For more details circle NED-334 B8 on enclosed inquiry slip

10 power FLAW FINDER

Quick-focusing illuminated magnifier—removable handle is a pocket flashlight. $8.95—with leather case, $12.45

40-50-60 power "PEN" MICROSCOPE

Pen size precision instrument with magnification equal to large lab models. With leather case, $17.50

Orders shipped immediately

WRITE TODAY for illustrated literature.

Since 1927—manufactured in the U.S.A. by—

E. W. PIKE & CO., INC.

577 Penna. Ave., Elizabeth, N. J. • Elizabeth 2-0630

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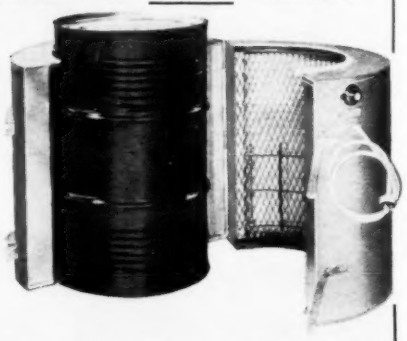
SOMEWHERE IN YOUR PLANT

THERE IS A PRACTICAL USE FOR A PALMER ELECTRIC DRUM WARMER



WARMS ANYTHING IN METAL DRUMS UP TO 450° F

Makes removal from drums of any material that handles better when warm SAFE, EASY and CONVENIENT.—by dipping, pouring or pumping.

Four models—for 55 and 30 gal. and 16 and 14 gal. (120 and 100# grease) drums.

Well-insulated hinged halves fit around drum at point of use eliminating handling of hot drums. For 115, 208, 230 or 460 volt, single or three phase.

Write Dept. 48 for literature, specifications and prices.

HAROLD L. Palmer COMPANY

28625 GRAND RIVER, FARMINGTON, MICH. PHONE GReenleaf 4-4350

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For the finishing touch that means so much!

For everything from the gleaming grillwork on low-slung automobiles to the precision finish on high-flying jet engine parts, you can depend on Jewel Brand Coated Abrasives for fast, economical grinding, smoothing and polishing. Order from your Industrial Distributor or write us for help on special applications.

COATED ABRASIVES

Belts • Rolls • Sheets • Discs • Specialties

ABRASIVE PRODUCTS, INC.
South Braintree 85, Massachusetts

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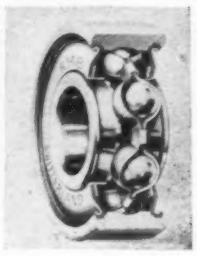
MINIATURE BALL BEARINGS in 3/16 to 1/2 in. sizes



Line of RMB miniature ball bearings made to ABEC-1 tolerances meets economy considerations in such less demanding applications as cam followers, potentiometers, and electric motors. Filmoseal type bearings and sealed bearings with one and two-piece ball separators are features. Bearings can be furnished with standard or special radial and axial clearances in sizes from 3/16 in. to 1/2 in. OD, including many metric sizes. Made by **Landis & Gyr, Inc.**, Dept. N, 45 W. 45th St., New York 36, N. Y.

▲ For more details circle NED-338 B8 on enclosed inquiry slip ▲

BENDING CLIP holds 90-degree bend in plastic tube

This bending clip will hold a permanent 90-degree bend in 1/4-in. OD Nylaflow polyamide tubing. Bend radius is 1 in. Clip will save time in installation of instrumentation, hydraulic, lubrication, air, or other fluid lines where quick bends are indicated. It is manually attached by simple snap-on procedure. Made by **Polymer Corp. of Pennsylvania**, 2140 Fairmont Ave., Reading, Pa.

▲ For more details circle NED-339 B8 on enclosed inquiry slip ▲

WHITEPRINT MACHINE makes 54 in. prints of any length

Drawings and many other types of forms can be reproduced at up to 100 fpm by the Printmaster 1000 whiteprint machine. It accommodates materials up to 54 in. wide by any length, using a 9000-w mercury vapor lamp and automatic ammonia feed in synchronized development at all printing speeds. Uniform cooling of lamp and cylinder produces a sharp print and permits processing of foils and film positives without sticking. Operation is on 220 v ac, 60 cycles, single phase. Machine has adjustable front print tray for stacking up to 24 x 54 in. and an optional rear stacking tray for prints up to 48 x 54 in. Enclosed roll holder accommodates two 200-yd rolls of sensitized material. Made by **General Aniline & Film Corp.**, Ozalid Div., 3 Corliss Lane, Johnson City, N. Y.

▲ For more details circle NED-340 B8 on enclosed inquiry slip ▲

Man! This is a cinch with NU-RAIL SLIP-ON FITTINGS

- Stair Rails
- Machine Guards
- Safety Railings
- Scaffolding
- Portable Guards

WRITE TODAY!

No Threading — No Welding

Any man in your shop or maintenance department can build sturdy safety railings with NU-RAIL slip-on fittings and new or used pipe in standard I.P.S. pipe sizes. A hex key and hacksaw are all he needs, because NU-RAIL fittings *slip on* the pipe, and the unique offset design reduces cutting to a minimum. Made of high-tensile aluminum alloy . . . no painting or plating . . . use for temporary railings, too. 100% pipe salvage.

THE HOLLAENDER MANUFACTURING CO.
3841 Spring Grove Ave., Cincinnati 23, Ohio

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ATTEND THE 1958 ASTE TOOL SHOW

CONVENTION CENTER • PHILADELPHIA • MAY 1-8

SEE all the very latest advances and improvements in more than thirty major categories of industrial products.

ATTEND top-level conferences, conducted by recognized authorities on the newest production techniques and developments.

MEET and exchange ideas with management, engineering, production, sales people from the nation's leading industrial concerns.

INSPECT the modern equipment and up-to-the-minute manufacturing methods being utilized in booming Delaware Valley plants.

AMERICAN SOCIETY OF TOOL ENGINEERS — TOOL SHOW — CONFERENCE — '58 — MAY 1 TO 8

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GOODYEAR TIRES

Look for this sign; there's a Goodyear dealer near you.

Name the job Here's your tire

SUPER RIB —All-new, all-purpose tire gives unusual strength and stamina in industrial service

HARD ROCK LUG — For industrial, mine and lumber service—where snags and cuts are a problem

LUG —For industrial, mine or material handling service, where deep, non-directional traction is required

RIB ALL-WEATHER — All-purpose tire with hi-flotation — for wheelbarrows, motor scooters, and material handling service

STUDDED — For extra traction in soft going, industrial and power-mower service

ALL-WEATHER —For industrial, power-mower, mine service, or highway service, where traction is a must

ORDER THESE INDUSTRIAL TIRES FROM YOUR GOODYEAR DEALER.

Triple-Tough Goodyear Pneumatic Industrials

Wherever pneumatic industrial tires are used, in any kind of service, you can count on one of these Goodyear Pneumatic Industrials to do the job—and do it better.

Built with Goodyear's exclusive Triple-Tempered 3-T Cord, they're especially designed to combat heat, impact and bruising. Your Goodyear dealer will be glad to help you pick the one best suited to your requirements. Call him, or write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Use the Right Tire for the Job — Buy and Specify

GOODYEAR 60

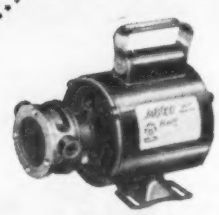
INDUSTRIAL TIRES

All-Weather—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle NED-343 B8 on enclosed inquiry slip ▲

cut pumping costs with

JABSCO INDUSTRIAL PUMPS



Model 4720
PORTABLE PUMP & MOTOR UNIT
½" Port Size—316 S. S. Construction

- INSTANTLY SELF-PRIMING
- SIMPLE, COMPACT, ONLY ONE MOVING PART
- DURABLE NEOPRENE IMPELLER
- SELF-LUBRICATED
- TROUBLE-FREE OPERATION

HERE'S another Jabsco industrial pump—designed and built for chemical, pharmaceutical and other industrial applications. Ideal for transfer of various liquids and acids—sump drainage, coolant pumping, general transfer, pulp in solution, filtering, brines, plating solutions—even fluids containing foreign matter or particles, silt, crystals, and other gritty materials. Bronze, stainless steel or plastic construction is available to *solve your specific* pumping problems. Pumps either light or heavy viscous liquids. Temperature ranges from 35° to 180° F. Write for a Jabsco factory recommendation for your own needs. Specify application, fluid pumped, temperature, pressure, etc.

FREE—send for catalog sheets, detailed information... no obligation, of course!

PATENTED AND PATENTS PENDING

JABSCO PUMP COMPANY
2031 Lincoln Street, Burbank, California

For more details circle NED-344 B8 on enclosed inquiry slip

Elco SCREWS ARE GOOD SCREWS
. . . Ask a man who has used them!

THREAD-CUTTING SCREWS

Many modern assemblies, particularly in plastics and soft metals, make use of these vital fasteners. ELCO is equipped to produce all standard types and sizes (or specials if desired) in any quantities, at economical prices, and usually for prompt delivery. Send prints for quotation. *Write for free package of samples.*

WOOD SCREWS
MACHINE SCREWS
MACHINE SCREW NUTS
TAPPING SCREWS
PHILLIPS AND SEMS SCREWS
PIPE PLUGS
STOVE BOLTS
CAP SCREWS
LAG SCREWS
DRIVE SCREWS
SPECIAL SCREWS
COLD HEADED PRODUCTS

We Also Specialize In Making Any of Our Products of the Following Materials

Stainless Steel, Copper, Monel, Bronze, Silicon Bronze, Aluminum, Brass, Ambrac, Special Analysis

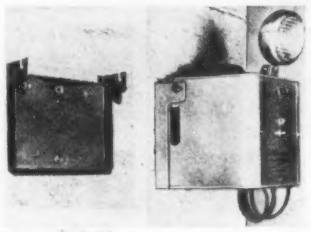
It's Always a good time to order from ELCO

ELCO TOOL & SCREW CORPORATION
1946 BROADWAY
ROCKFORD
ILLINOIS

ELCO SCREWS

For more details circle NED-345 B8 on enclosed inquiry slip

EMERGENCY LIGHT BRACKET simplifies installation on walls



Made of 16-gage spot welded steel, this wall bracket simplifies mounting of any Exide Lightguard 6-v battery emergency lighting unit. Bracket can be quickly installed on wood, tile, or masonry walls, with wood screws, toggle bolts, or lag screws. Pilot balls on the light which indicate the state of battery charge and liquid level are clearly visible due to bracket's open sides. Finished in gray hammertone, brackets are made by **Electric Storage Battery Co.**, Exide Industrial Div., Dept. NED, Box 8109, Philadelphia 1, Pa.

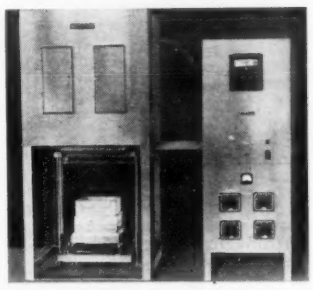
For more details circle NED-346 B8 on enclosed inquiry slip

DRILL POINT CHECKER measures for angle and centrality

Hardened ways increase the life of the improved Matrix drill point measuring instrument, designed to check concentricity within 0.001 in. and angle to 1 degree with a dial indicator. Two vees support a straight or tapered shank drill. Device is made in ¼ to ¾-in. and ¾ to 2½-in. drill capacities. Available from **Engis Equipment Co.**, Dept. RR10, 431 S. Dearborn St., Chicago 5, Ill.

For more details circle NED-347 B8 on enclosed inquiry slip

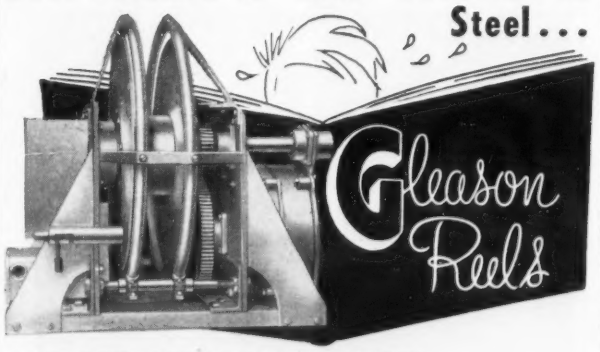
ELEVATOR TYPE KILN operates up to 2800° F on 220 v



Hearth of this elevator type kiln is raised and lowered by means of airplane cable controls. It travels without jamming in rigid vertical guide rails, or it may be moved sideways on horizontal external rails if desired. Setting space of 17 x 12 x 20 in. provides for firing ceramic shapes, crucibles, and other requirements. Kiln operates up to 2800° F, using 220 v with 70-amp input. With its control unit, the floor space required is 6 ft by 3 ft 4 in. Variations in size and instrumentation are offered. Made by **Harrop Ceramic Service Co.**, Electric Furnace Div., Dept. D, 3470 E. Fifth Ave., Columbus 19, Ohio.

For more details circle NED-348 B8 on enclosed inquiry slip

Best Solution to "Reel" Problems in Steel...



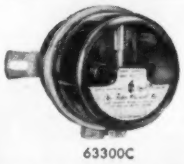
LIFT-STRETCH CABLE CONTROL

Gleason SM Series is a "natural" for steel industry reel needs. Rugged, tough, strong, gear type, spring motor driven, it's built for smooth, safe electric cable control — through years of 24-hour a day service. Designed for 125 Amp. 600 Volt cable, SM Reels provide continuous contact, improved extra wide current collectors, adjustable spring torque, replaceable spring motors, ball-bearing friction-free action, two-way payout, and many other advantages.

Costs you nothing to find out how you may benefit by GLEASON REEL Cable Control. Write for Catalog or engineering suggestions.

Gleason Reel Corp
738 N. Plankinton Ave., Milwaukee, Wis.
SPRING REEL HEADQUARTERS FOR ALL INDUSTRY

For more details circle NED-349 B8 on enclosed inquiry slip



63300C

PHOTOELECTRIC CONTROLS for OUTDOOR LIGHTING

64401

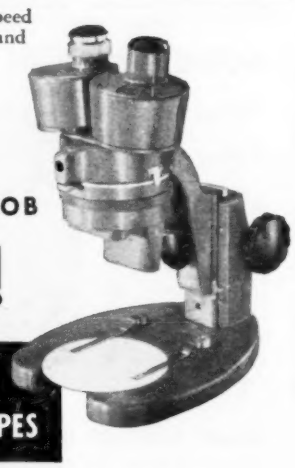
Fisher-Pierce photoelectric controls provide dependable, automatic control of lights regardless of time of day, season or weather. Lights are switched on at the same daylight value each day, off when daylight returns. Non-mechanical, they never need setting or re-setting, even after power failures. The basic F-P circuit has proven dependable, rugged and trouble-free by more than nine years' use, in controlling lights on aircraft obstructions, signs and in store windows; in parking, loading and storage areas; in street lighting and other installations. Load capacities from 300 to 6000 watts; integral and auxiliary protective devices; wide variety of mounting arrangements; SPST, SPDT, DPST contacts; turn-on settings from 1 to 500 foot-candles.

Write for descriptive bulletins, outlining your requirements.

THE FISHER-PIERCE CO., INC.
86 PEARL STREET, BOSTON 85, MASS.

For more details circle NED-350 B8 on enclosed inquiry slip

SEE how big 3-D views speed assembly, measurement and inspection of tiny parts



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TRIAL!

Bausch & Lomb STEREOMICROSCOPES

These essential production tools make small-parts manufacture faster and easier, make precision surer. Views are vivid, magnified in natural 3-dimensional detail. Complete line fits exact model to your specific industrial needs. Dustproof, shockproof, built for rugged production-line use—you can mount them right on machines!

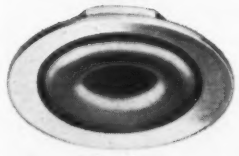
See for yourself! Use a B&L Stereomicroscope on your own job for 15 days—absolutely free, no obligation. All we ask is the opportunity to let our Stereomicroscopes prove themselves to you.

Just call your regular B&L dealer, or WRITE (on company letterhead, please) to Bausch & Lomb Optical Co., 72726 St. Paul St., Rochester 2, N. Y.

For more details circle NED-351 B8 on enclosed inquiry slip

Seal your assemblies against Moisture

Top View



Bottom View

— with this vibration-proof

4-IN-1 LOCK NUT

Eliminate Four Parts

A single Washer Type PALNUT Lock Nut, with bonded-in plastisol sealer, replaces a plain hex nut, lockwasher, flat washer and sealer washer. The PALNUT provides great savings in parts cost—slashes assembly time—reduces weight and space. It locks with a resilient action that is safe for fragile or pliant parts. Assemblies are moisture- and vibration-proof. High speed assembly is obtained with power tools. May be removed and re-used. Wide variety of base diameters and designs for mechanical and electrical applications. Send details of your assembly to receive free samples and literature.

WASHER TYPE PALNUT TRADE MARK® LOCK NUTS

THE PALNUT COMPANY
45 Glen Road
Mountainside, N. J.

In Canada:
P. L. Robertson Co., Ltd., Milton, Ont.

For more details circle NED-352 B8 on enclosed inquiry slip

REFRIGERATORS
AUTOMOBILES
TELEVISION
DISHWASHERS
IRONERS
WASHERS
DRYERS
ELECTRICAL EQUIPMENT
SMALL APPLIANCES
RADIOS
RECORD PLAYERS
HI-FI SETS
RANGES

hex head screws are used to fasten just about everything!

and just about everyone uses APEX sockets to fasten hex head screws!

Write, on your company letterhead please, for your copy of APEX Catalog 29-R.

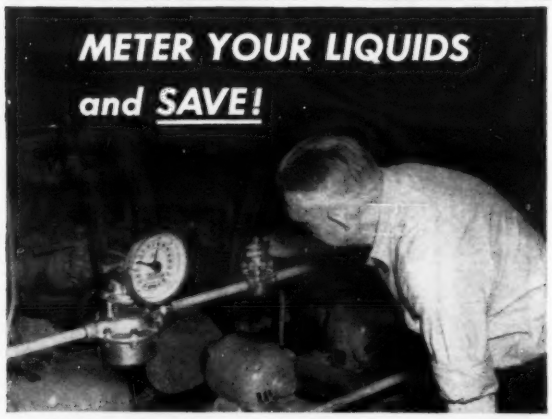
1933 • A Quarter Century of Service to Industry • 1958

Ask APEX for the answer to your fastening problem!

THE APEX MACHINE & TOOL COMPANY
1046 S. Patterson Blvd. • Dayton 2, Ohio

For more details circle NED-353 B8 on enclosed inquiry slip

METER YOUR LIQUIDS and SAVE!



CONTROL COSTS—CONTROL QUALITY

Wherever liquids are stored, mixed or consumed, you will be ahead to measure with Rockwell industrial meters. Then you'll control your costs, control your processes, control your end product quality.

There's a Rockwell meter to measure most any liquid—oils, chemicals, paints, liquors, solvents, etc.—even corrosive fluids. Write for bulletin OG-400. Rockwell Mfg. Co., Pittsburgh 8, Pa.

INDUSTRIAL METERS
another fine product by
ROCKWELL

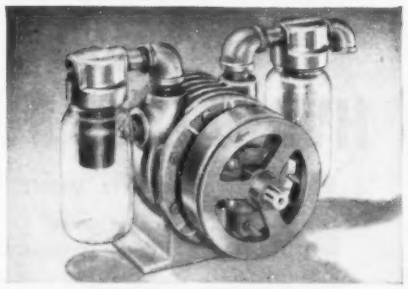
Rockwell ER Meter with large reset register

For more details circle NED-354 B8 on enclosed inquiry slip

ROTARY AIR GAST PRODUCTS

Runs without oil —

Model 3040 Oil-less Air Pump. Vac. to 20", pressure to 10 p.s.i. To 24 c.f.m., ¾ to 1½ h.p.



Oil-free air blast with carbon-vane
GAST ROTARY AIR PUMPS

Need compressed air that's *absolutely free* of oil mist? A Gast Oil-less Air Pump may be your answer! Air flow *can't* contain oil vapor, because no oil is used.

You also eliminate lubrication problems when vacuum or pressure pump is mounted in a hard-to-service location.

Four carbon vanes lubricate themselves. Ball bearings are grease-sealed for life and separated from pump chamber by a ventilated space. Built in 7 models.

Write for Oil-less Bulletins 152A and VP-356. GAST MANUFACTURING CORP., P.O. Box 117-R Benton Harbor, Michigan.

Other Oil-less Models

Built in six smaller sizes, some with integral motors — 1/12 to ⅓ h.p.

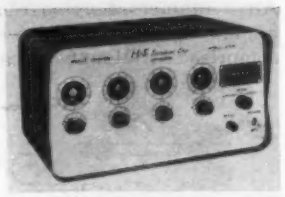
See Catalog in Sweet's Design File

GAST ROTARY
• AIR MOTORS TO 7 H.P.
• COMPRESSORS TO 30 P.S.I.
• VACUUM PUMPS TO 28 IN.

"Air may be your answer!"

For more details circle NED-355 B8 on enclosed inquiry slip

PRESET COUNTER-CONTROL operates at speeds to 5000 per sec

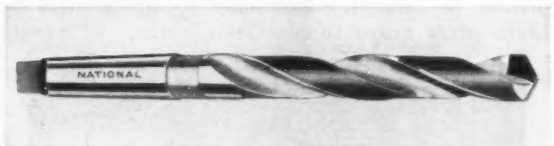


High speed counting and recycling rates have been designed into this Pre-Set counter for control purposes in automatic operations. Panel switching arrangement permits use as a totalizing counter at rates up to 5000 counts per second, or as a pre-set counter adjustable from 1 to 9999 counts at rates up to 1000 per second without error. An optional batch counter also totalizes batches at rates up to 600 per minute. Instrument combines glow-transfer tubes with unitized printed circuit construction for reliable operation. A variety of input facilities and output control functions, offered as standard features, assure versatility. Made by **I-L-S Instrument Corp.**, 4553 W. 160th St., Cleveland 11, Ohio.

For more details circle NED-356 B8 on enclosed inquiry slip

CARBIDE TWIST DRILLS in tipped and solid types

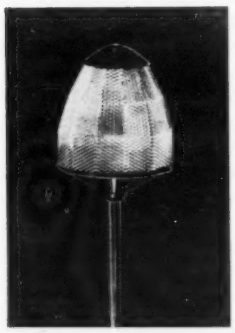
Especially applicable for drilling nonmetallic and nonferrous materials, tipped and solid carbide twist drills can be operated at high speeds. They are



available from stock in all popular sizes and styles. Drills are also usable for cast iron and some steels where chip-forming conditions are satisfactory. Made by **National Twist Drill & Tool Co.**, Dept. 66, Rochester, Mich.

For more details circle NED-357 B8 on enclosed inquiry slip

ALL-DIRECTIONAL REFLECTOR marks borders of vehicle areas



This Plexiglas Spark-L-Ite all-directional reflector sparkles like a light bulb when approached from any direction. Used to mark parking lots, delivery driveways, loading dock edges, aisles, and other semi-lighted areas used by cars, trucks or other plant vehicles, reflector is hermetically sealed. It can be placed next to ground or at any height. Ten and 18 - in. extensions are available. Reflector is offered in white, amber, red, green, and other colors. Made by **Dynamic Specialties Corp.**, Dept. A, Box 184, Birmingham, Mich.

For more details circle NED-358 B8 on enclosed inquiry slip

FREE NEW-16 PAGE CATALOG
WRITE FOR YOUR COPY TODAY

JIG AND FIXTURE COMPONENTS
LATCH BOLTS
CAST IRON HAND KNOBS
ALUMINUM HAND KNOBS
QUARTER TURN SCREWS
SHOULDER SCREWS
JIG FEET (3 TYPES)
SPHERICAL WASHERS
FIXTURE KEYS
KNURLED HEAD SCREWS
TOGGLE SHOE CLAMPS & V-PADS

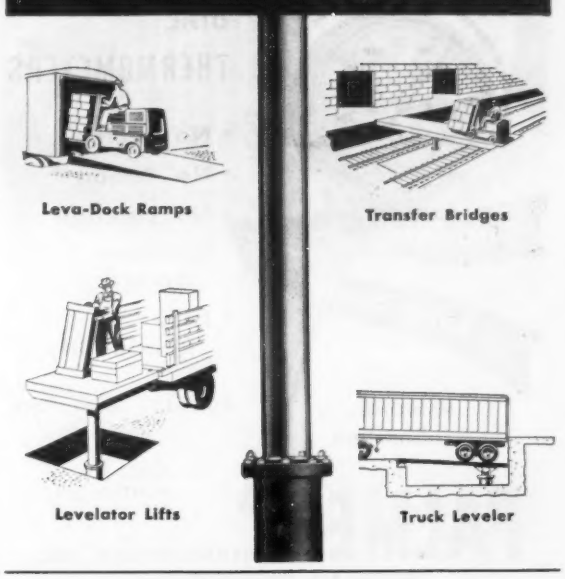
HOLD DOWN AND CLAMPING TOOLS
T-NUT & STUD SETS
STEP BLOCK & CLAMP SETS
FLANGED NUTS
CUT THREAD STUDS
TEE NUTS
COUPLING NUTS
ADJUSTABLE STEP BLOCKS
STRAP CLAMPS (PLAIN & STEP TYPE)

CATALOG INCLUDES TRACING TEMPLATES

Northwestern
127 HOLLIER AVE., DAYTON 3, OHIO

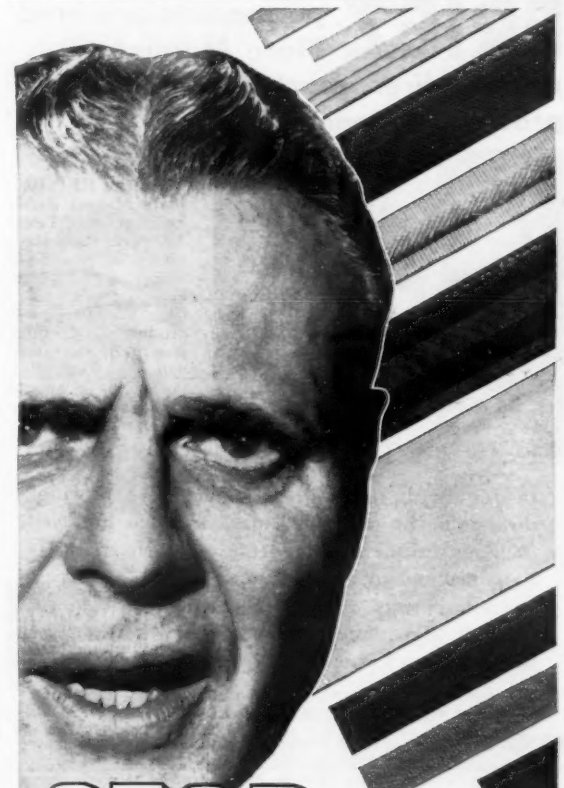
For more details circle NED-359 B8 on enclosed inquiry slip

Rotary
OILDRAULIC POWER
Cuts the cost of lifting heavy loads



Write for catalogs
ROTARY LIFT CO., 1167 KENTUCKY, MEMPHIS, TENN.

For more details circle NED-360 B8 on enclosed inquiry slip



STOP PAYING HIGH PRICES FOR "SPECIAL WEBBING"

We can probably supply it at a standard price!

Because we are America's OLDEST Webbing manufacturer, we naturally have the biggest line of Standard Webbings in the country. From dainty little nylon straps for milady's footwear to rugged cargo straps, we carry hundreds of sizes, widths, weights, plain colors and fancy patterns. This tremendous assortment includes cotton, nylon, dynel, dacron, jute, combed peeler mercerized and high tensile webbings. 80% of our STANDARD line would be considered "SPECIALS" by other manufacturers and sold to you from the "SPECIAL" price list. That's why, no matter what use you have for webbing, you can very likely save money here. Let us give you the facts.

Write for FREE SAMPLES and PRICES

Tell us how much webbing you use annually and if possible send a sample for us to match.

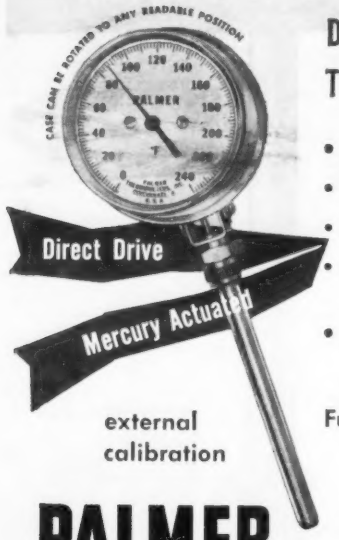
BUFFALO WEAVING AND BELTING CO., INC.
210 CHANDLER STREET BUFFALO 7, N. Y.

We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER.

For more details circle NED-361 B8 on enclosed inquiry slip

PALMER *presents*

an outstanding improvement in



DIAL THERMOMETERS

- No Sector
- No Pinion
- No Linkage
- Constant Accuracy
- Easy Readability

external calibration

Full 3½" Dial Face

WRITE FOR BULLETIN 350

PALMER THERMOMETERS, INC.
Norwood Ave., Cincinnati 12, Ohio
Mfrs. of Industrial Laboratory Recording and Dial Thermometers

▲ For more details circle NED-363 B8 on enclosed inquiry slip ▲

ERIEZ permanent-powered Plate Magnets

prevent fires, machinery damage, product contamination

The Eriez HI-POWR Plate Magnet shown here at the Tetley Tea plant daily traps about a pound of tramp iron (wire, bolts, nails, etc.) that could cause product contamination and machinery damage. Tetley enjoys a $5,000 annual saving from the magnet.

In 100 fields, Eriez Plate Magnets are proving their value by pulling tramp iron from lines of *all* kinds. Eriez Plate Magnets are non-electric, self contained, operate without any wires or attachments. Their magnetic strength is guaranteed forever; first cost is the *only* cost.

ERIEZ HI-POWR MAGNETIC SEPARATORS

Magnetic SEPARATION AUTOMATION VIBRATION Equipment

Couldn't your operations use an Eriez Plate Magnet? For BIG NEW BULLETIN, write

ERIEZ Mfg. Co. 808 Magnet Dr., Erie, Pa.

▲ For more details circle NED-364 B8 on enclosed inquiry slip ▲

NEW *Rapistan*®

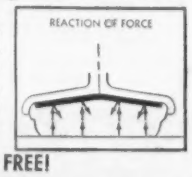
DEMOUNTABLE WHEEL

now in wide range of sizes

OUT-WEARS MOLDED-ON TIRES-CUTS COSTS 65%

You get 50% longer life from Rapistan MB DEMOUNTABLE WHEELS. You cut costs, because MB tires are replaceable — in 3 to 5 minutes, and cost far less than new wheels or re-molding tires.

The secret of Rapistan MB Wheel's long life is in the exclusive V-shaped steel tire backing. Load force is deflected toward the center of the tire, keeping rubber firm and dense, minimizing bulging and "chunking out," reducing friction and wear. Available in 6", 8" and 10" dia. Watch for new 3" tread size in 10" dia. for high capacity use.



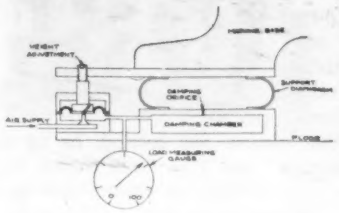
Write for New Bulletin MB-57 — FREE!

Rapistan The RAPIDS-STANDARD CO. INCORPORATED
441 Rapistan Bldg.
Grand Rapids 2, Michigan
fastest growing name in casters

▲ For more details circle NED-365 B8 on enclosed inquiry slip ▲

MACHINE SUPPORTS
pneumatic type maintains level

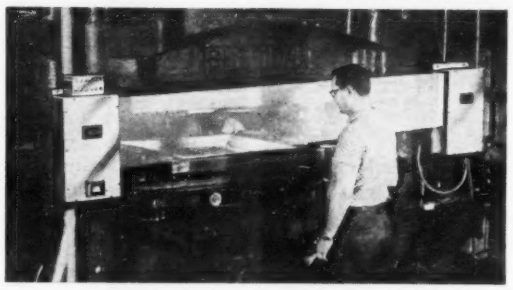
Air container of nylon reinforced neoprene and cast aluminum, fitted with a pressure indicating gage, comprise Air-Mount machine supports. Units are placed under each support point of a machine and connected to a 100-psi factory air supply. Machine is supported on columns of air. Pressure gage readings indicate machine weight supported by each unit. The machine is isolated from outside vibration and is maintained level after initial set-up by maintaining original gage readings. Air-Mounts support and indicate loads from 500 to 12,000 lb each. Made by **Weber Instrument Co.**, Dept. M-1, 11301 Schaefer Rd., Detroit 27, Mich.



▲ For more details circle NED-366 B8 on enclosed inquiry slip ▲

PRESS GUARD
wide light beam protects operator of clutch-equipped press or broach

Broad beam of light is thrown across danger areas of presses or broaching machines by the Curtain of Light press guard to protect operator. If curtain



is broken at any place, even by thickness of a man's wrist, press is stopped. Guard is used primarily on presses that can be stopped instantly, such as hydraulic or friction-clutch machines. When operator's hand is withdrawn to safe position, press can be tripped automatically, giving operator extra time to reach for new stock. Production increases up to 140 per cent can be realized.

Equipment consists of a projector and receiver, usually bolted to press frame, and a control unit with easily serviced plug-in components. Shock mounts isolate lamps and tubes from machine vibrations. Models 507, 513, and 518 have respective beam heights of 7, 13, and 18 in. Guard can also be used to prevent accidental tripping of mechanical "dog clutch" presses, providing they operate at 100 strokes per minute or more. It features fail-safe operation. Made by **Electronic Control Corp.**, 1571 E. Forest Ave., Detroit 7, Mich.

▲ For more details circle NED-367 B8 on enclosed inquiry slip ▲

This uncommon carrier...

is rapidly becoming the *common* answer to materials handling problems

HERE'S HOW DOUGLAS AIRCRAFT USES CONVOY #T-31 TOTE BOXES TO SPEED COMPONENTS TO ASSEMBLY

We make many standard size tote boxes . . . nesting, stacking and vertical sided . . . but we'll custom-make any box your product or use calls for.

Special sizes and shapes are economically produced by our "Chem-Board" process of rigidizing hi-test corrugated board to remarkable strength.

More and more famous name industries are using Convoy Tote Boxes. Try us.

CONVOY, INC.
CANTON 6, OHIO
P. O. Station B, Box 216-N
GReenwood 7-4569

▲ For more details circle NED-368 B8 on enclosed inquiry slip ▲

The Sign of QUALITY MOTOR CONTROL

3 pole—Size 1 3 pole—Sizes 4 & 5

ALLEN-BRADLEY CONTACTORS
the ONE Complete Line

In all 9 sizes . . . from the small Size 00 (10 amps) to the husky Size 7 (900 amps) . . . A-B Bulletin 702 contactors have the same trouble free solenoid design. There is only ONE moving part . . . the plunger that carries the double break, silver alloy contacts which never need maintenance. For complete information, send for your A-B Handy Catalog.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY

▲ For more details circle NED-369 B8 on enclosed inquiry slip ▲

Won't work loose!

Self-locking UNBRAKO socket head cap screws

UNBRAKO self-locking socket head cap screws with Nylok* give you positive locking without lockwashers, cotter pins or wires. The tough, resilient nylon pellet—serviceable from —70 to +250°F — locks these screws securely, seated or not, wherever wrenching stops. They won't work loose. Can be reused. Can be used as adjusting screws. Pellet also acts as liquid seal. Knurled heads give sure finger grip for fast starting. Accurate sockets assure positive, non-slip wrenching. Heat treated alloy steel, controlled fillets, continuous grain flow, fully formed Class 3A threads for maximum strength, exact fit. Standard sizes #0 to 1 in. Also in plated finishes and stainless. Request Bull. 2193. Unbrako Socket Screw Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

*T.M. Reg. U.S. Pat. Off., The Nylok Corporation

UNBRAKO products are sold through industrial distributors

SPS Jenkintown • Pennsylvania
Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co., Inc. • Nutt-Shel Corporation • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle NED-370 B8 on enclosed inquiry slip ▲

HAND HYDRAULIC PUMP

Single and Double Designs to 20,000 Psi
With or Without Reservoir

160 Cubic Inch Reservoir with 8" x 8" Base Plate. Optional Size Piston: ⅜", ½", ¾", 1". Handle length: 18 inches. Catalog No. 160

We specialize in hand pump units to operate in temperatures from minus 65F to plus 160 F and with any capacity reservoirs required.

The single pump with ½" or ¾" piston now available in stainless steel.

WILLIAM S. PINE
Hydraulic Hand Pumps for 1001 Uses
1635 E. 22nd St., Los Angeles 11, Calif.

▲ For more details circle NED-371 B8 on enclosed inquiry slip ▲

ND FACTS

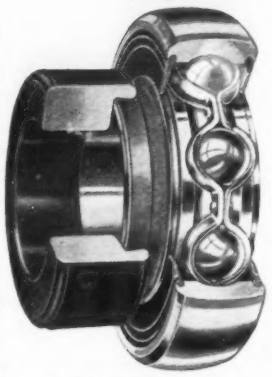
GREASE SEALED IN . . . DIRT SEALED OUT!

SENTRI-SEAL ON GUARD AGAINST DIRT

Grease stays *in* . . . dirt stays *out* . . . with New Departure Type AE adapter ball bearings. They're protected with Sentri-Seals, assuring highly efficient sealing at all speeds and under all bearing operating conditions.

These ball bearings are easily mounted . . . and at low cost. They eliminate the need for shaft shoulders, ground bearing seats or press fits, as well as separate seals or closures.

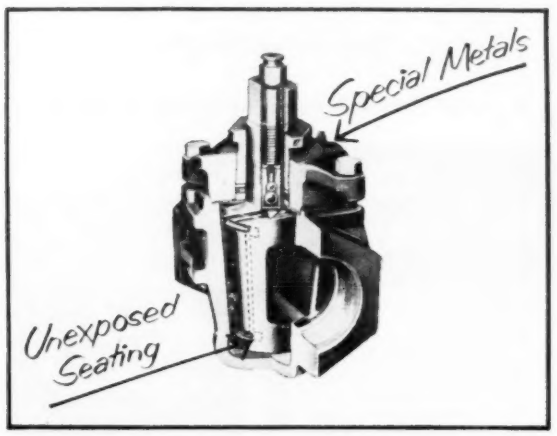
Installation is fast, with no special tools required. The eccentric cam has a self-locking action when tightened in direction of shaft rotation. Send for General Sentri-Seal Catalog S.



Type AE adapter bearings are available with either cylindrical or spherical outer rings for various applications.

NEW DEPARTURE
DIVISION OF GENERAL MOTORS • BRISTOL, CONN.

▲ For more details circle NED-372 B8 on enclosed inquiry slip ▲



ROCKWELL-Nordstrom VALVES CUT VALVE CORROSION COSTS TWO WAYS

By specifying Rockwell-Nordstrom lubricated plug valves, you'll have two-way protection against the high cost of valve corrosion.

1. Rockwell-Nordstrom valves have completely unexposed seating areas that can't be corroded or eroded by line fluids. Pressurized lubricant forms a continuous, instantly replaceable "soft seat" for positive shut-off.

2. A complete selection of semi-steel, steel, 316 stainless, Monel, bronze and other corrosion resisting metals means you'll have just the right valve for the right service.

Rockwell-Nordstrom lubricated plug valves are available in a complete range of sizes and pressures for every process industry need. They cost no more to buy, often less, than ordinary valves.

For details, see your supplier or write: Rockwell Manufacturing Co., Pittsburgh 8, Pennsylvania.

Canadian Valve Licensee: Peacock Brothers Limited.

SEND FOR NEW, FREE BOOKLET ON CORROSION-RESISTANT ROCKWELL-NORDSTROM VALVES . . . JUST CHECK ITEM NED-373 ON THE REPLY CARD

ROCKWELL-Nordstrom VALVES
it's ROCKWELL MANUFACTURING COMPANY

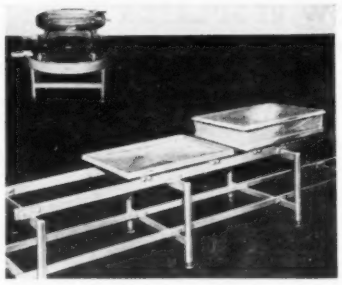
▲ For more details circle NED-373 B8 on enclosed inquiry slip ▲

SPRING ASSORTMENT
offered free on letterhead request

Consisting of a minimum 120 springs of various sizes and tensions (four of each kind) and made of all types of materials, this Little Stuff assortment is offered especially for development, experimental, and maintenance use. Sample kit includes compression, extension, and torsion springs. This assortment is available free only to enginering, buying, and specifying officials who write for it on their company letterhead. Letter must be postmarked not later than March 25, 1958. Write to **Paragon Spring Co.**, 4615 W. Fulton St., Chicago 44, Ill.

▲ For more details circle NED-374 B8 on enclosed inquiry slip ▲

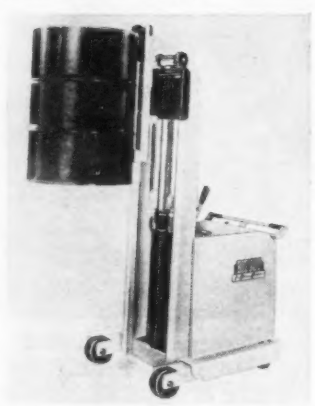
TRACK CONVEYOR
equipped with movable platforms



Combination of track conveyor and carriers moves products rapidly, smoothly, and without vibration. Parts are placed on the movable platform or in a pan which can be inserted in or lifted off the roller-equipped carrier. Several platforms or carriers can be placed end-to-end and moved easily at one time. Various sizes are offered. Several available conveyor types have turntables or transfer cars. Turntable shown allows traffic to move through or divert at 90 degrees. Made by **Westover Corp.**, Nomad Equipment Div., Dept. 1, 3110 W. Fond du Lac Ave., Milwaukee 10, Wis.

▲ For more details circle NED-375 B8 on enclosed inquiry slip ▲

DRUM HANDLER
truck operates in 24-in. aisles



Lifting heights from 62 to 90 in. are available in the 22-in. wide Big Joe drum-handling lift truck. It can be maneuvered in a standard 24-in. aisle, and is capable of lifting 1000-lb metal or fiber drums. The battery-operated truck picks up and releases any type of drum automatically, regardless of rim size. Drum handling device can be interchanged with lifting forks for handling and stacking pallets, boxes, skids, and storage bins. Made by **Big Joe Mfg. Co.**, Industrial Rd., Wisconsin Dells 1, Wis.

▲ For more details circle NED-376 B8 on enclosed inquiry slip ▲

ROTATING TUMBLER
cleans small, hard-to-handle parts

Tumbling speeds can be varied up to 120 rpm by throttling the ½-hp air motor of the improved Model T-18 rotating tumbler for cleaning small, hard-to-handle parts. The machine has a removable door for loading and unloading. Over-all dimensions are 22 in. long by 18 in. in diameter. The all-steel tumbler can be submerged in boiling solutions while being used for degreasing of paint, plating, and other dipping purposes. Made by **Dayton Rogers Mfg. Co.**, 2822 13th Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-377 B8 on enclosed inquiry slip ▲

JARKE MINI-MODULE STOCK STORAGE RACKS

Most efficient and flexible storage of short, medium and long lengths of bar, rod and pipe stock.

Pre-fabricated Modular Units
Quickly Set Up Or Taken Down By One Man
No Bolts No Tools • Light Weight
Special nesting caps permit fast no-slip stacking, rigid vertically-interlocked tiers. Stack them to fit your needs exactly. Heavy-duty tubular steel construction.

Send for details and FREE set of miniature plastic Mini-Modules for easy storage planning.

JARKE MANUFACTURING COMPANY
5407 N. Broadway
Chicago 40, Illinois

BAR AND FLANGE RACKS • WIRE COIL RACKS • CRANE GRABS • STEELMOBILE

▲ For more details circle NED-378 B8 on enclosed inquiry slip ▲

NEW! "Feather-touch" PUSH-to-TEST PILOT LIGHT

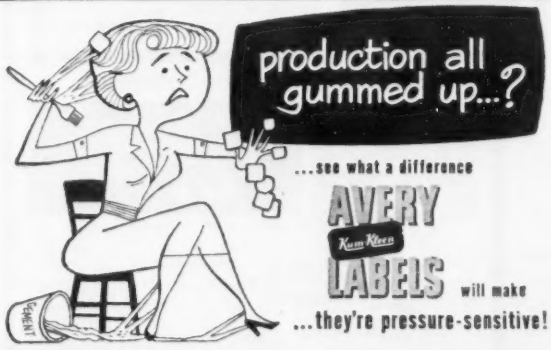
- Completely oil-tight, even when depressed
- Pressure connections eliminate internal wires
- Positive contact "feel" in test position
- No additional panel space required
- Choice of 5 color caps
- Full range of voltage ratings
- Mounts interchangeably with oil-tight pushbuttons and selector switches

Write for Bulletin 9001-T to Square D Company, 4041 North Richards Street, Milwaukee 12, Wis.

NOW . . . EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

▲ For more details circle NED-379 B8 on enclosed inquiry slip ▲



■ Self-adhesive Avery Labels are quick, clean and neat... there's no mess, no fuss, no sticky fingers. Combined with patented Avery dispensers, they'll speed and simplify your labeling—and production! They're laid right on your product—*without moistening.* They'll put your trade mark on that hard-to-label surface...put a warning sticker or wiring diagram on your product or any clean, smooth spot. For inspection stickers...color coding...guarantees—they'll really speed production, packaging or any labeling or marking job!

■ Available in sheets or rolls...in any size, shape or color. Write for case histories and FREE SAMPLES—*today!*

AVERY ADHESIVE LABEL CORP., custom div. 1021
117 Liberty Street, New York 6 • 608 South Dearborn Street, Chicago 5
1616 S. California Ave., Monrovia, Calif. • Offices in other Principal Cities

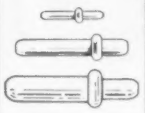
☐ Send us case histories & free samples
☐ Tell us about your dispensers
☐ Have the Avery Label man call

Name_____
Company_____
Address_____
City_____ State_____

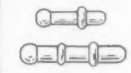
▲ For more details circle NED-380 B8 on enclosed inquiry slip ▲

50% SAVINGS with BEAD CHAIN® Multi-Swage Parts

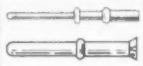
CONTACT PINS



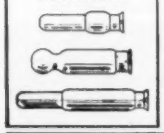
TERMINALS



JACKS



FRICTION CONTACTS



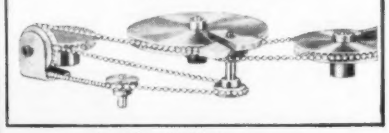
also PRINTED CIRCUIT MINIATURE PARTS

Contact pins, terminals, jacks or any small tubular parts. Maximum ¼" diameter x 1¼" length.

Send sketch for quotations.

BEAD CHAIN DRIVES

Low-speed positive drives or motion transfer ... at far less cost!



Send for Multi-Swage or Bead Chain Drive Catalogs!

THE BEAD CHAIN MFG. CO.

16 Mountain Grove St., Bridgeport 5, Conn.

▲ For more details circle NED-381 B8 on enclosed inquiry slip ▲

NEW CONCEPT OF SAFETY AND STABILITY IN BALLYMORE Safety-Step LADDERS

SECURE FEELING OF WORKERS RESULTS IN BETTER, FASTER WORK

The new pyramid design of BALLYMORE Safety-Step LADDERS offers above-floor working safety never before available. Thirty-five models offer work levels up to fifteen feet.

Write to the Ballymore Company, West Chester 3, Pa., for the new 20-page catalog describing the complete line of Ballymore equipment for above-floor working safety.

MANY MODELS TO CHOOSE FROM

STEEL OR ALUMINUM

Three-step, "A" type

REVOLUTIONARY PYRAMID DESIGN GIVES ADDED SAFETY

PYRAMIDED FOR SAFETY

Casters provide fingertip mobility. Rubber-tipped legs lock to floor when in use.

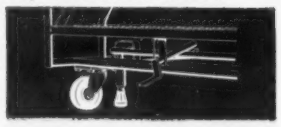
Seven-step, Handrails

CHOICE OF WIDTHS
20" or 30" at bottom

CHOICE OF HEIGHTS
One to seven steps, steel. One to five steps, aluminum.

BALLYMORE "Hi-boy" SAFETY-STEP LADDERS with BALLYLOCK

Step on the pedal, two legs and non-swiveling rear casters hold ladder firmly in place while in use. Release pedal, ladder rolls easily to next location.



Eight-step, work levels to twelve feet.

Twelve-step, work levels to fifteen feet.

TOP PRODUCTION WITH SAFE, CONVENIENT WORK PLATFORMS AND HYDRAULIC LIFTS

Fixed and adjustable-level work platforms and mobile access lifts available in many sizes. Special platforms and lifts designed to fulfill specific requirements.

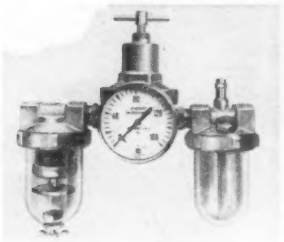
BALLYMORE

EQUIPMENT FOR ABOVE-FLOOR WORKING SAFETY

THE STANDARD BY WHICH ABOVE-FLOOR SAFETY IS JUDGED

▲ For more details circle NED-382 B8 on enclosed inquiry slip ▲

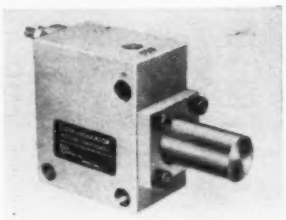
PRESSURE REGULATOR
for air, water, oil, or gas service



Dependable pressure control for air, water, oil, or gas service is assured with use of Generant two or four-port high pressure regulators. Units feature a new type venturi that increases differential pressure as much 50 psi on full flows at the point at seat opening and the chamber under the diaphragm. With inlet pressure of 200 psi and a reduced pressure of 80 psi at no flow, the flow can be increased to 80 cfm of free air with pressure drop of only 2 psi. Brass forged units are made in 5-50, 10-100, and 10-200 psi ranges. They withstand up to 400 psi initial pressures. Unit shown is combined with air filter and mist lubricator. Made by **Generant Engineering Co.**, 256 S. 20th St., Newark 3, N. J.

▲ For more details circle NED-383 B8 on enclosed inquiry slip ▲

HYDRAULIC FLOW REGULATOR
has built-in relief valve



Hydraulic circuitry is simplified with use of this combination by-pass and restrictor type flow regulator which features a built-in relief valve. Unit can be used as a high capacity relief valve, as a remotely operated relief valve, to replace a pump for power steering, or to provide small flow for a control system. Port connections are designed for ½, ¾, or 1-in. pipe. Relief valve is adjustable within 100-800, 250-1500, and 500-3000 psi pressure ranges. Made by **Fluid Controls, Inc.**, Dept. 6-B, 1284 N. Center St., Mentor, Ohio.

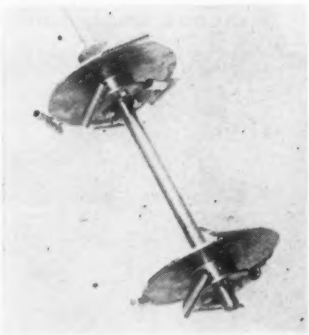
▲ For more details circle NED-384 B8 on enclosed inquiry slip ▲

LINT-FREE CLOTHING
various pieces available

Lab coats, coveralls, and two-piece uniforms are available in line of Ply-Garb lint-free Orlon clothing for electronics, instrument, and research workers. Garments are woven of individual extruded filaments and are unaffected by acids, alkalies, and most organic chemicals. Lattice pockets, double fly zipper, and other custom features may be ordered. Clothing is washable, nonshrinking in boiling water, and nonabsorbent. It can be decontaminated and possesses good abrasion resistance. Made by **Milburn Co.**, Dept. N, 3246 E. Woodbridge, Detroit 7, Mich.

▲ For more details circle NED-385 B8 on enclosed inquiry slip ▲

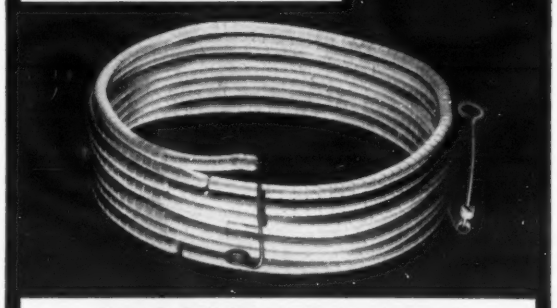
STIRRING PADDLE
also causes media flow in vessel



Centrifugal force, suction, shearing action, and counter whirl are set up by the Impelator stirring paddle used in the lab to stir, prepare emulsions, mix liquids with solids, or mix liquids of varying viscosities. Combination of actions creates intense mixing zone and also promotes high velocity flow through the entire vessel. Unit consists of several small conical tubes mounted around the periphery of set of discs, one at bottom of vertical shaft, the other above. Latter disc is adjustable up or down the shaft. Others can be added according to height of vessel. Tubes are set to create turbulence in upward and downward direction. Made by **Palo Laboratory Supplies**, Dept. N, 81 Reade St., New York 7, N. Y.

▲ For more details circle NED-386 B8 on enclosed inquiry slip ▲

ARCOS WELDING FACTS



Heat-O-Coil Speeds Preheating and Stress Relieving of Pipe Welds

The Heat-O-Coil is a length of resistance wire covered with ceramic beads. Easy to handle—just wrap it around a pipe joint; connect its two ring ends to your welding generator; set current to produce required heat.

Use on any size pipe. Saves time and additional equipment for field use. Also useful where other means of heat treating cannot be used. Priced as low as $10.25 per coil.

SEND FOR FREE BULLETIN

. . . Gives all details, illustrated directions, Heat-O-Coil sizes and prices.

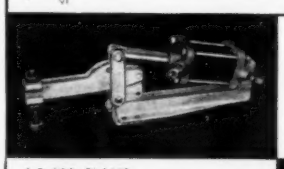
Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | *Filler Metal Specialists*

▲ For more details circle NED-387 B8 on enclosed inquiry slip ▲

You asked for it . . .

KNU-VISE has come up with it!



TWO NEW AIR-OPERATED CLAMPS with 800 pound clamping force

AO-800 CLAMP

AODT-800
DOUBLE TOGGLE CLAMP

Because you asked for it, Lapeer's vast line of Knu-Vise clamps now features four distinct groups of air-operated clamps. Two new 800 lb. air clamps have been added to the widely accepted 200, 400 and 1200 lb. air clamps, thereby rounding out the Knu-Vise series. The Model AO-800 clamp is for conventional holding operations—the Model AODT-800 for those difficult mounting situations.

For complete information on these units and the more than 150 other models available, write for catalog today!

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS **LAPEER MANUFACTURING CO.**

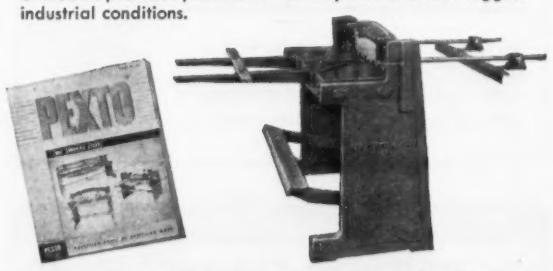
3062 DAVISON ROAD
LAPEER, MICHIGAN

WESTERN DIV.: ART LEWIS PRODUCTION EQUIP. CO.
419 Magnolia Street, Glendale, California
CANADIAN DIV.: HIGGINSON EQUIP. SALES LTD.
1131 Pettit Road, Burlington, Ontario

▲ For more details circle NED-388 B8 on enclosed inquiry slip ▲

PEXTO
SQUARING SHEARS for Industry

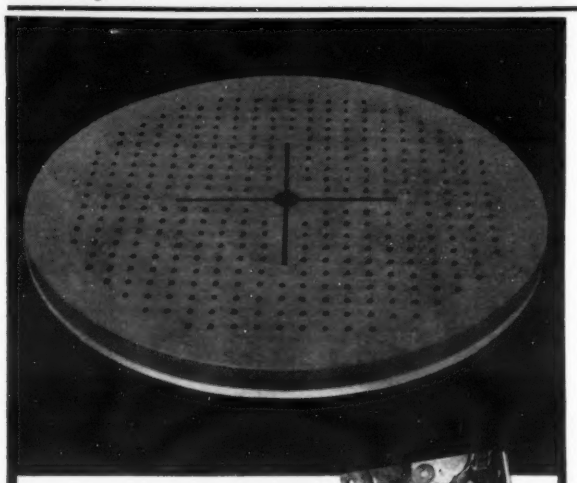
PEXTO industrial shears, power- and foot-operated, easily and accurately cut sheet materials such as plastic, fiber, metal, rubber, insulation, Fiberglas, and textiles. A variety of models provides precision-smooth operation under rugged industrial conditions.



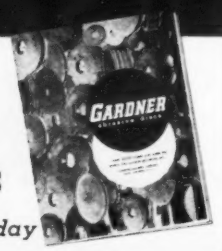
Send for new Foot and Power Squaring Shear Bulletins Nos. 57 and 157.

THE PECK, STOW & WILCOX COMPANY
SOUTHINGTON, CONN. U. S. A.

▲ For more details circle NED-389 B8 on enclosed inquiry slip ▲



new 20-page selector guide for abrasive discs



...send for your copy today

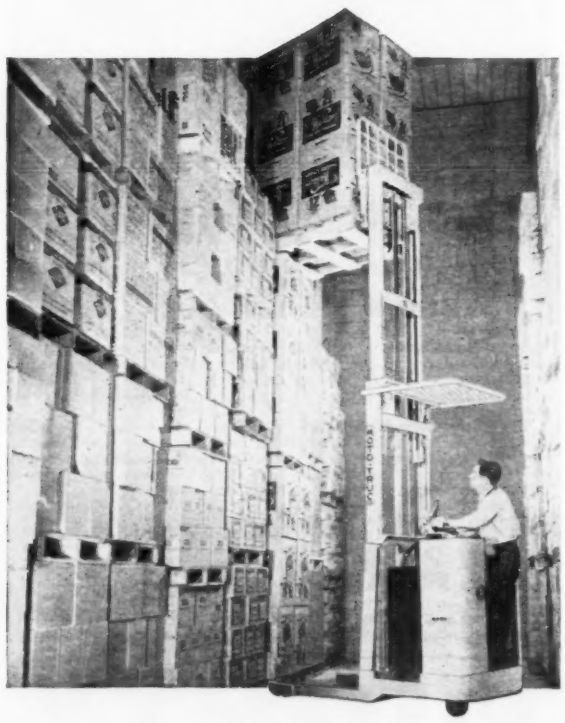
GARDNER MACHINE COMPANY
abrasive discs
460 Gardner St.
Beloit, Wisconsin

▲ For more details circle NED-390 B8 on enclosed inquiry slip ▲

Whatever the Load...

MOTO-TRUC

Stacks MORE in Less Space



Sturdy Straddle Trucks For Ceiling-High Stacking in 6-Foot Aisles

■ Rugged "Ride-A-Man" straddle trucks, built by MOTO-TRUC permit fast stacking of 48"-long loads from 6-foot aisles. Equipped with famous Magic Circle Steering, turns of more than 90° are possible without tire scrubbing. At the same time, this unique steering arrangement provides solid, four-wheel support that assures outstanding stacking stability even when loads are fully elevated.

Although built small for maximum maneuverability, MOTO-TRUCs can take it. One look will prove that their *rugged simplicity* will keep them on the job longer at lower cost! Investigate the space-saving features of MOTO-TRUC straddle trucks today!

A Complete Line — "Ride-A-Man" straddle trucks are built in capacities to 4000 lbs. with standard lifts to 130", higher for special applications. MOTO-TRUC also builds a complete line of "walkie" type straddle trucks.

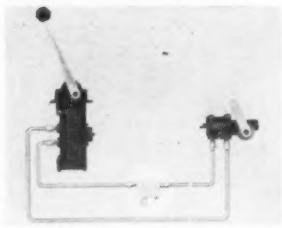
Write for Free Catalogs

Designers and Manufacturers of Walkie and Small Rider Type Trucks

The MOTO-TRUC Co. 1961 East 59th St. Cleveland 3, Ohio

▲ For more details circle NED-391 B8 on enclosed inquiry slip ▲

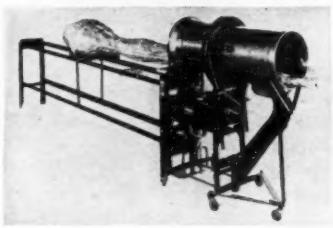
HYDRAULIC REMOTE CONTROL
for valves, clutches, throttles



Self-contained and fully hydraulic, this manual remote control system now incorporates an integral filler-bleeder fitting. This speeds installation and adjustment. Compensation in the master unit takes care of any changes in fluid due to temperature variations. System provides smooth, positive, remote control of valves, clutches, transmissions, throttles, governors, conveyor gates, and similar devices. Master control lever and remote actuator lever maintain synchronism through a 114-degree arc, with a full 500-lb-in. torque output in either direction. Made by **Hydronic Co.**, Dept. G, 12685 Arnold Ave., Detroit 39, Mich.

▲ For more details circle NED-392 B8 on enclosed inquiry slip ▲

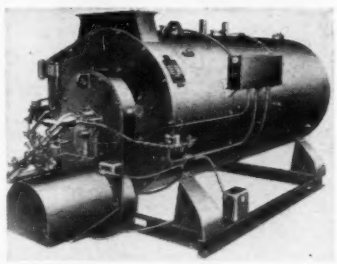
BUNDLE TYING MACHINE
handles bundles up to any length



Elongated bundles with up to 11¾-in. diameter and any length are easily tied by the Ring tying machine. Operator places material to be tied in position on machine and steps on foot trip. Tying arm of machine double-wraps twine around bundle to proper tension, ties the twine into a nonslip double loop knot, then cuts the twine. Operator can move bundle along on conveyor table and tie it in as many places as desired. Machine is powered by a standard 110-v ac single-phase ½-hp motor. Made by **B. H. Bunn Co.**, 7605 S. Vincennes Ave., Chicago 20, Ill.

▲ For more details circle NED-393 B8 on enclosed inquiry slip ▲

HOT WATER GENERATORS
670,000 to 6,700,000 Btu ratings

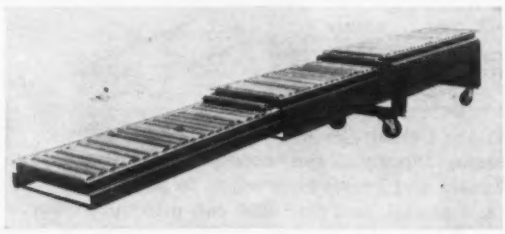


Cyclotherm packaged hot water generators for standard forced circulation hot water systems have capacities in the 670,000 to 6,700,000 Btu per hour range. Other models for high temperature operation or for systems requiring larger capacities are available. Units feature 80 per cent efficiency, electronic controls, and interchangeable fuels. They meet ASME, state, Federal, National Board, and Underwriters' specifications. Combustion control for low water protection, operating temperature controls, and a high temperature limit control are incorporated. Connections to fuel, electricity, water, and vent ready units for operation. Made by **National-U. S. Radiator Corp.**, Cyclotherm Div., Dept. NED, Oswego 6, N. Y.

▲ For more details circle NED-394 B8 on enclosed inquiry slip ▲

TELESCOPING CONVEYOR
has two or three cantilever sections

Absence of legs beneath the extended sections of this telescoping conveyor makes it easy to maneuver inside of trucks in loading and unloading operations.



The first of two or three telescoping cantilever sections rests on the dock or truck-bed. Telescoping sections are extended with a 10-lb pull. The two-section model extends up to 18 ft and the three-section model up to 30 ft. Capacity is as high as 100 lb per foot. Widths of 12, 18, and 24 in. are offered with wheels or rollers for gravity use, or with live rollers and power belt. Made by **Wilkie Co.**, 5521 Arch St., Philadelphia 39, Pa.

▲ For more details circle NED-395 B8 on enclosed inquiry slip ▲

A Stockroom You Can Build Yourself!

SECTIONAL STACKBINS® give you the greatest flexibility and ease of installation ever devised for parts, tools, materials storage containers. You can set them up in minutes without tools! By combining bin sizes and number and size of openings, you get a storage system tailored to fit your particular needs. SECTIONAL STACKBINS give you maximum storage utility in minimum space. Available in 6 interstacking sizes.

For full information and prices, WRITE TODAY!

STACKBIN CORPORATION
1081 Main Street, Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM "Stacked and Still Accessible"

▲ For more details circle NED-396 B8 on enclosed inquiry slip ▲

"SILVER" PAPER SHREDDERS FOR COST-CONSCIOUS EXECUTIVES

USED IN THOUSANDS OF PLANTS TO REDUCE PACKING COSTS

TRY THE "SILVER 13-C" FOR 10 DAYS—FREE!

Reduce your packing material costs as much as 40% by shredding your own paper. The "Silver 13-C's" fast, efficient, low-cost operation and many new mechanical improvements make it the fastest-selling Shredder in the industrial field. 7 other models available, too, depending on your needs and capacity desired. 10-day free trial in your own plant. Write for helpful data on how you can cut your packing costs . . . at the same time, dispose of excess paper materials.

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

▲ For more details circle NED-397 B8 on enclosed inquiry slip ▲

KODAGRAPH MICRO-FILE EQUIPMENT

Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

● **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.

● **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.

● **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.

● **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.

● **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

Write today *for new booklet—"Kodagraph microfilming for new economies in record keeping."*

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.

▲ For more details circle NED-398 B8 on enclosed inquiry slip ▲

NEW...TRUSCON STEEL "BUDGET BUILDINGS" save Time, Money and Construction Costs!

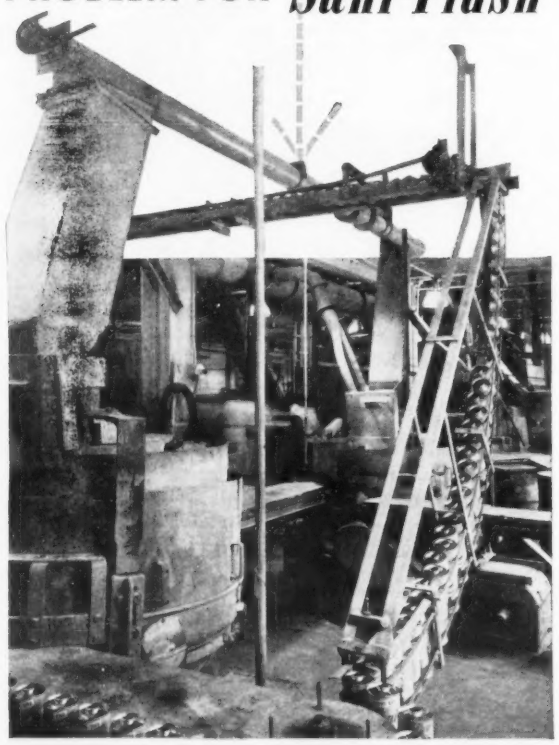
This new Truscon Standard Building is attractive, distinctive, smartly styled—designed for community acceptance. It is available for immediate delivery in widths of 32, 36, 40, 44, and 48-feet, 12 and 14-foot heights. Write for latest bulletin.

TRUSCON STEEL DIVISION
REPUBLIC STEEL
1094 Albert Street, Youngstown 1, Ohio

C-4619

For more details circle NED-399 B8 on enclosed inquiry slip

CANTON *flo-tube* SOLVES MATERIAL HANDLING PROBLEM FOR *Sani-Flush*



SCREW CONVEYOR SAVES 88% ON CAPITAL INVESTMENT

Boyle-Midway, Inc. uses Flo-tube to move sodium bisulfate at will to an additional packaging machine for filling new 35 oz. economy-size Sani-Flush at an 88% saving in capital investment for proportioning and blending equipment.

Flo-tubes **move or feed** chemicals, coal, gravel, salt, sand, sawdust, sugar, woodchips and other bulk materials. They **maintain** predetermined delivery rates. They **save time** . . . up to 95% on general applications. They **save space.** Power source is optional. Flo-tubes exclusive Synchro-gear-drive motor is 98% **efficient.**

For complete information about Flo-tubes versatility in feeding bulk materials dependably, cleanly and economically . . . write today.

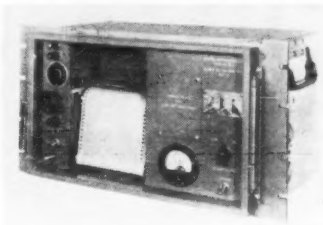
1907 50th 1957 CANTON STOKERS

CANTON STOKER CORPORATION
102 Andrew Place, S. W.
Canton 1, Ohio

N-599-CS

For more details circle NED-400 B8 on enclosed inquiry slip

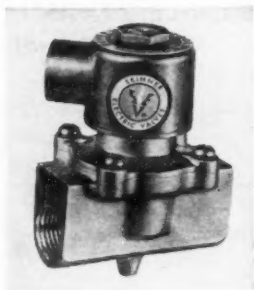
LEVEL RECORDER
is compact and weatherproof



Frequency response, sound, noise, and vibration measurements are made and recorded with this Model SL-4M marine level recorder. Especially designed for humid, tropical, shipboard, or field use, instrument is moistureproof and enclosed in an anodized case. Hinged Plexiglas door protects recording mechanism and affords view of the 4-in. wide chart. Made by **Sound Apparatus Co.,** Box 586-N, Stirling, N. J.

For more details circle NED-401 B8 on enclosed inquiry slip

SOLENOID VALVES
two-way, pilot-operated type



Flow of air, water, oil, and other common media is controlled by L Series of two-way, normally closed, pilot-operated solenoid valves. Initial offering is a 1¾-lb, 3 31/32-in. high valve with a ½-in. orifice with either ⅜ or ½-in. pipe taps. Operation can be from 5 to 150 psi at −40 to 180° F. Body is forged brass, and the soft, shockproof diaphragm is synthetic rubber. Valves for normally-open operation, with optional manual override, explosionproof construction, and choice of electrical connections are available. Made by **Skinner Chuck Co.,** Skinner Electric Valve Div., Dept. L131, 105 Edgewood Ave., New Britain, Conn.

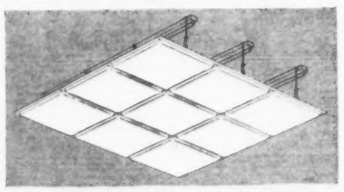
For more details circle NED-402 B8 on enclosed inquiry slip

TEMPERATURE CONTROL
accurate to ½ per cent of scale

Mercury-actuated Model MFS indicating temperature control will sense, indicate, and control processes and appliances within ranges of −30 to 1100° F. Accurate to within ½ per cent of scale range, it is offered in 10 different scale ranges for application to process operations, industrial ovens, kilns, dryers, and packaging lines. Accu-Vision makes possible accurate setting and reading. A large dial area, magnifying pointer with two hairlines for parallax sighting, and dual mounting design which permits flush or wall mounting are incorporated. The glass-reinforced polyester plastic case is sealed against moisture and dust. Made by **Partlow Corp.,** Dept. 50, 505 Campion Rd., New Hartford, N. Y.

For more details circle NED-403 B8 on enclosed inquiry slip

CEILING ERECTION SYSTEM
components include diffusers and louvers, color filters, and baffles



By combining standard components, an infinite variety of wall-to-wall ceiling designs can be achieved with the Ceiling '58 system. Designer can choose from a selection of diffusers and louvers varied as to style, pattern, texture, material, and size, and can introduce color with color filters and acoustic baffles. Ceiling is erected with simple crimp connector.

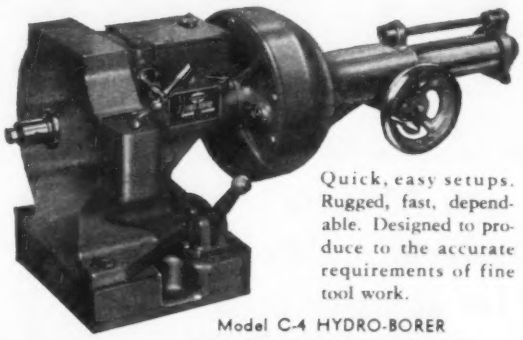
Grid tees are indexed on 12-in. centers, and electrical channels run crosswise to runner tees. Well angles and tees are finished extruded aluminum. Filters for the 2 x 2-ft diffusers come in standard pastel tints. Where diffuser or louver cannot be cut to fill out room size, a luminous metal filler is supplied. It can be sheared to size. Offered by **Wakefield Co.,** Wakefield Park, Vermilion, Ohio.

For more details circle NED-404 B8 on enclosed inquiry slip

GREENLEE PRECISION BORING AT LOW COST

Model C-4 HYDRO-BORER

Offers precision boring quality at low cost. Easily mounted on any type of base. Fixtures can be mounted on face of machine.

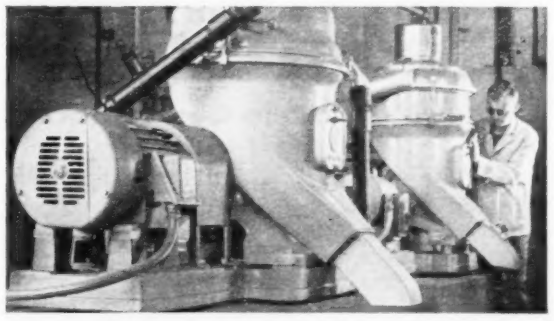


Quick, easy setups. Rugged, fast, dependable. Designed to produce to the accurate requirements of fine tool work.

Model C-4 HYDRO-BORER
WRITE FOR COMPLETE INFORMATION

GREENLEE BROS. & CO.
2242 MASON AVENUE
Rockford, Illinois

For more details circle NED-405 B8 on enclosed inquiry slip



New continuous centrifuge runs for a month without cleaning

You can feed slurries up to 35% solids by volume to the Titan Superjector continuously for as long as a month without shutdown for cleaning.

The Titan Superjector periodically ejects sludge *automatically* while running at full speed, cleans itself completely in 10 seconds.

It concentrates solids up to 40% dry weight, produces effluents clarified down to 0.00% solids. Discharges mixed solid particles up to ⅛" diameter and handles specific gravities up to 1.60.

Since there is no braking from continuous discharge of solids, power consumption can be 50% less than conventional centrifuges.

Write Dept. NED-28 for Bulletin No. 946.

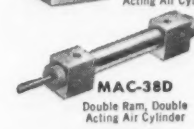
THE PFAUDLER CO.
a division of PFAUDLER PERMUTIT INC., Rochester 3, N.Y.

For more details circle NED-406 B8 on enclosed inquiry slip

MIGHTY MIDGETS

MAC-38S
Single Ram, Double Acting Air Cylinder

. . . that SAVE SPACE and WEIGHT when You AUTOMATE!



MAC-38D
Double Ram, Double Acting Air Cylinder

MAC-38S
Spring Return, Single Acting Air Cylinder

MAN-12
12-Port Manifold

MAV-2 & 3
2 and 3-Way Air Valves

You are sure to find these miniature but MIGHTY pneumatic cylinders, valves and accessories most useful for automatic work and control applications, especially where savings of weight and space are a MUST!

Clippard's versatile line of air components are "precisioneered" for millions of cycles of trouble-free operation. Small and easily mounted, they fit most anywhere to help automate your present work operations, or to improve equipment you are now designing.

Put these mighty midgets to work for you, NOW, to increase production and improve work quality AUTOMATICALLY.

WRITE TODAY FOR FREE LITERATURE AND ATTRACTIVE PRICES!

***Clippard* INSTRUMENT LABORATORY, INC.**
7388-N Colerain Road, Cincinnati 24, Ohio
Manufacturers of R.F. Coils, Electronic Equipment, Miniature Pneumatic Devices

For more details circle NED-407 B8 on enclosed inquiry slip

LONG RANGE . . . HIGH MAGNIFICATION
8 NEW MODELS SWISS MADE

Now Federal adds to its famous Testmaster series eight NEW models, all made to highest Federal standards by Swiss craftsmen, and all immediately available . . . with

- *Four times the range* and *twice the magnification* you'd expect in a test indicator.
- *Even greater magnification* (50% more) if you select large dial models. Both large and small dial models available in .0001" and .0005" graduations, Regular and Perpendicular styles.
- Many features, including Federal's exclusive integral dovetails for easy, positive mounting.

For whole story, ask for brochure.

FEDERAL PRODUCTS CORP.
8172 Eddy St., Providence 1, R. I.

Ask **FEDERAL** *First*
FOR RECOMMENDATIONS IN MODERN GAGES . . .
Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting, or Automation Gaging

▲ For more details circle NED-408 B8 on enclosed inquiry slip ▲

Simple Design...
Rugged Construction

WELLS HORIZONTAL METAL CUTTING BAND SAWS

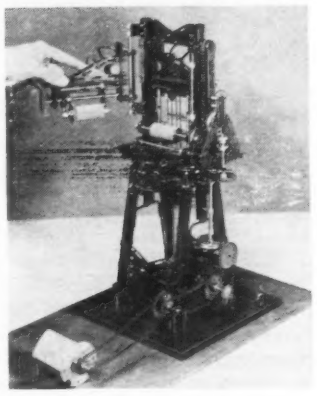
The simple design and rugged construction of every "Wellsaw" didn't just happen. We planned it that way! Over 30 years of specialized band saw experience and know-how is your assurance of the quality and service with each machine produced by Wells Manufacturing Corporation.

There is a Wells Saw of the right style, capacity and speed to do a better, more economical job for you. Wells Saws will deliver long, dependable service. Operating and maintenance costs are very low. See your Wells Distributor.

Wells Saws — *The Pioneers of Horizontal*
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding St. • Three Rivers, Mich.

▲ For more details circle NED-409 B8 on enclosed inquiry slip ▲

MODEL CONSTRUCTION KITS
make experimental machines, drives, or mechanisms with various parts

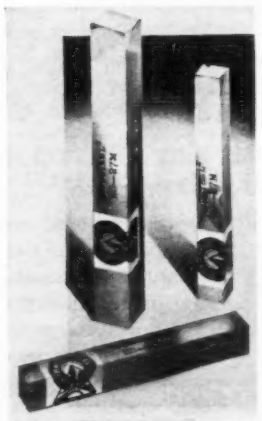


Precision working models of practically any type of machine, drive, or mechanism can be made from the precision-machined mechanical components included in Swedish-made FAC construction kits. Included are ball bearings; spur, bevel, internal, and worm gears; gear racks; ratchets; sprockets; pulleys; sheaves; couplings; springs; wheels; discs; and universal joints. Such mechanisms as reciprocating and slide motions, geared transmissions, differentials, and coil-spring devices can be produced with standard components. Prototype models can be built, or models can be made to prove and sell mechanical concepts.

Kits are made in two sizes, each supplied with an instruction manual. The FAC-X1 kit contains 2700 parts, including an assortment of gears and machine elements in its top section and many components and fasteners in the bottom section of a 23½ x 15 x 2¾-in. hardwood case. Price is $250. Larger kit FAC-X2 has 4700 parts in four sections and is intended for industrial machine design and development requirements. Price is $400. Extra parts for expanding the basic kits are available. Available from **Overseas Commodex Corp.**, FAC Div., Dept. NED, 9551 Grand River, Detroit 4, Mich.

▲ For more details circle NED-411 B8 on enclosed inquiry slip ▲

CAST ALLOY CUTTING TOOL
makes deep cuts at high speeds



High tensile strength, toughness, red hardness, and maintained edge strength are features of Hardsteel HD-27M cast alloy used in this improved tool bit. It has a low coefficient of friction, and tools made from it can take deep cuts at high speeds with a minimum of cratering. Tool bit is available in standard square and rectangular sizes for turning, facing, boring, grooving, and forming all types of steel, cast and malleable iron, brass, bronze, and nonferrous materials. Cast shapes can also be made to specification. Made by **Black Drill Co.**, 1380 E. 222nd St., Cleveland 17, Ohio.

▲ For more details circle NED-412 B8 on enclosed inquiry slip ▲

CUT GLOVE COSTS

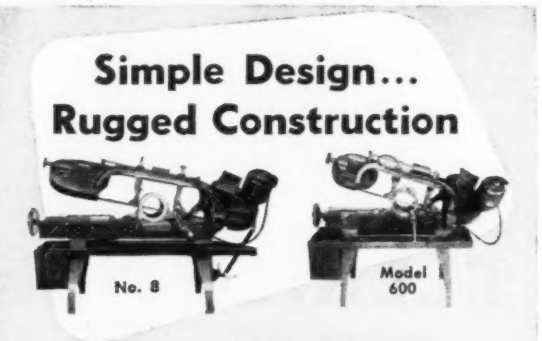
Give added protection with the JOMAC COST-REDUCTION PLAN

Customer: leading automobile manufacturer. Operation: fabricating major body components. This is just one more case where the Jomac Cost-Reduction Plan is saving money and increasing worker safety in industry. Write for "Evidence" booklet shown opposite. It will show you how this plan can work in your plant too! Write to Dept. G, Phila. 38, Pa.

WRITE TODAY!

JOMAC INDUSTRIAL GLOVES
Plants in Philadelphia, Pa., and Warsaw, Ind.
In Canada: Safety Supply Company, Toronto
In Europe: North-Jomac Ltd., London, W1

▲ For more details circle NED-413 B8 on enclosed inquiry slip ▲



TWELVE TIMES NEWER!
I
MOST MODERN OF OFFICE & PLANT COOLERS — YET PRICED THE SAME!

SUNROC

ADVANCED

1 — Beautiful, Modern Design
2 — New, Improved Cooling Method
3 — Completely Concealed Plumbing...and 9 other ADVANCED exclusives for more **endurance with modern convenience**

AVAILABLE IN COLOR *Write for literature*

Sunroc Corporation—Glen Riddle—Pa.
Send ADVANCED literature, promptly, to:
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NAME..... TITLE.....
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WATER COOLERS
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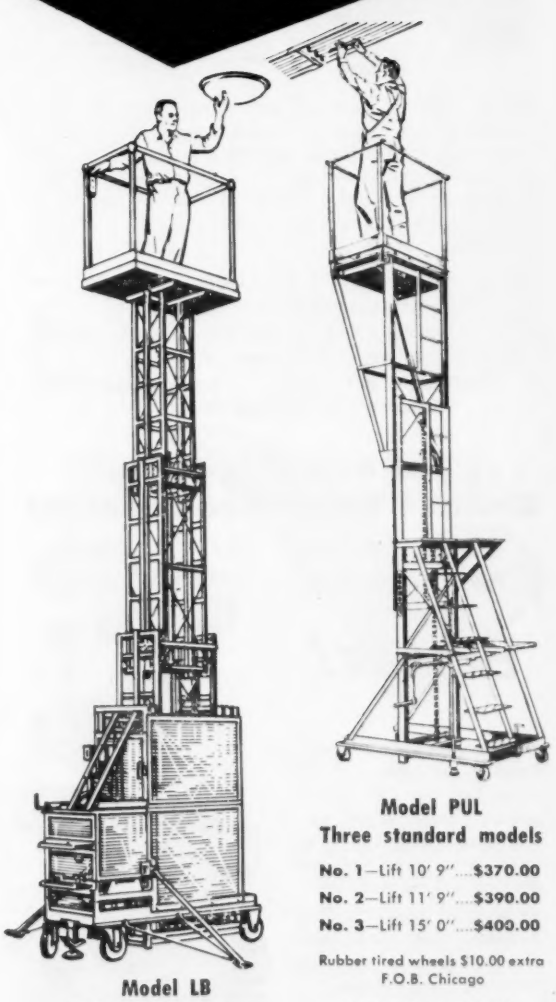
FILTER/PURIFIERS

SUNROC CORPORATION
Glen Riddle, Pa.

DIVISIONS & BRANCHES IN ALL MAJOR CITIES *also* TELKEE SYSTEMS

▲ For more details circle NED-410 B8 on enclosed inquiry slip ▲

90% of overhead servicing jobs can be done faster and with perfect safety with these ECONOMY Hi-Reach Telescopers!



Model LB
Hi-Reach Telescopers
Four heights 20 ft. to 35 ft.
Standard Models from $1510.00 up.

Model PUL
Three standard models
No. 1—Lift 10' 9"....**$370.00**
No. 2—Lift 11' 9"....**$390.00**
No. 3—Lift 15' 0"....**$400.00**
Rubber tired wheels $10.00 extra
F.O.B. Chicago

Custom built Hi-Reach Telescopers up to 100 ft.
Write for complete catalogue

Headquarters for standard and special built overhead service lifters and material handling equipment since 1901

ECONOMY ENGINEERING
4519 West Lake St., Chicago 24, Illinois

▲ For more details circle NED-414 B8 on enclosed inquiry slip ▲

Cut reaming costs by 50% with a

GREAVES REAMER DRIVER

Do the job in fewer man-hours! Drive your reamers the modern *low-cost* way—with a bench-mounted Greaves Reamer Driver.

Put a Greaves Reamer Driver on the job. Send today for complete information.

CAPACITY—¼" to 1½" reamers.

FOOT SWITCH OPERATION—leaves both hands free for holding the work.

MOTOR—1725 rpm.—110 V AC—wired for light socket connection.

4-SPEED OPERATION—20, 32, 56 and 85 rpm. Easy changeover.

4-JAW CHUCK—universal machine tool chuck—(3-jaw chuck optional).

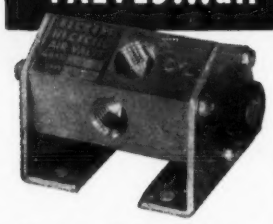
COMPACT, COMPLETE—12¾" wide, 21¼" long, 9¾" high.

THE GREAVES MACHINE TOOL CO.
2302 EASTERN AVENUE CINCINNATI 2, OHIO

▲ For more details circle NED-416 B8 on enclosed inquiry slip ▲

Absolute control!

BECKETT Hi-Cyclic
VALVES...air or hydraulic



Model B Beckett Hi-Cyclic Air Valve. Also made in two springloaded styles—Model BB ball point for cam operating, Model BSL for straight line actuation. Spool end nuts, or optional exhaust type speed controls may be used for velocity adjustment.

Now available with any of 7 spool types, Beckett "Basic Series" Valves with adjustable stroke spool provide positive piston control at high cyclic rates for an unlimited range of uses in many fields. Extremely small size makes them ideal for use in machine tools and other mechanisms—inexpensive, too!

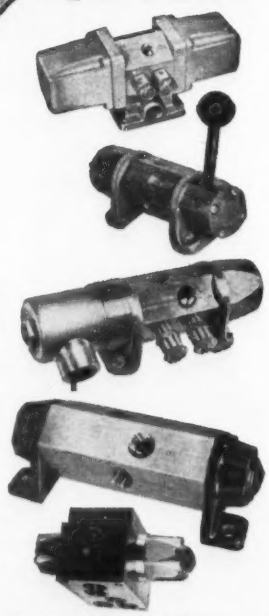
Built in 3-way and 4-way types for use with—

AIR or NON-CORROSIVE GASES: NPT Sizes ⅛, ¼, ⅜ and ½ Mod.; 5-port Dual Exhaust; 150 PSI pressure, or vacuum service.

HYDRAULIC: NPT Sizes ⅛, ¼ and ⅜; 4-port Single Exhaust; 1500 PSI pressure.

. . . For any directional Control Valve Requirement

first check it with Beckett!



✔ A complete line of advanced-design air and hydraulic control valves. More than 150 models—solenoid, manifold, piloted, solenoid piloted, lever, cam roller, spring center, detent and combinations of these actuators.

✔ All spool types: 2 position, 3 position, float piston, open center, closed center, servo, port exhausting center position.

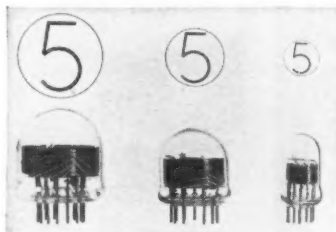
✔ All carried in stock for immediate delivery. Write for complete valve catalog or detailed information on Hi-Cyclic Valves to meet your specific requirements.

DISTRIBUTORS IN MAJOR CITIES COAST-TO-COAST

THE BECKETT-HARCUM COMPANY
1147 WAYNE ROAD, WILMINGTON, OHIO

▲ For more details circle NED-417 B8 on enclosed inquiry slip ▲

NUMERICAL READ-OUT TUBES
switching tube or switch operated



Expanded line of Nixie all-electronic in-line numerical tubes includes two new ten-digit direct read-out types with increased life expectancy. They have a nonflecting background and are the gas-filled, cold cathode type. The BD 206 Type 7153 Super Nixie (left) has a bulb diameter of 1¼ in., a viewing distance of 60 to 75 ft, and a wide viewing angle. Shown in the center is BD 302 Type 6844 improved Standard Nixie with bulb of 1 in. and viewing distance of 35 ft. Miniature BD 200 Nixie is shown at right. Tubes can operate directly from beam switching tubes or directly from switches. Made by **Burroughs Corp.**, Electronic Tube Div., Dept. 1, Plainfield, N. J.

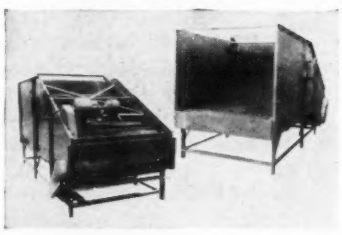
▲ For more details circle NED-418 B8 on enclosed inquiry slip ▲

FLASHER SAFETY LIGHT
operates 90 days, visible 1 mile

Dual 7 in. diameter lenses of Model HD-2-7 flasher safety light give beams that are visible for over 1 mile in both directions. The battery-operated light flashes over 100 times per minute and will operate continuously up to 90 days without battery replacement. It employs a center mounted neon flasher tube. Lenses are available in red, amber, blue, green, clear, or any combination of these colors. Heavy gage formed steel case, plus rubber shock mounting of neon tube and timer give light high resistance to impact damage. Vandalproof Conut fastener and two-point mounting, with bracket which engages slot in barricade, minimizes theft and vandalism losses. Made by **R. D. Fageol Co.**, Dept. N, Kent, Ohio.

▲ For more details circle NED-419 B8 on enclosed inquiry slip ▲

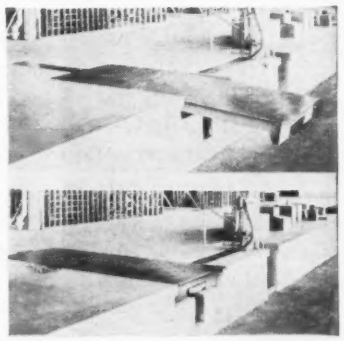
BOX CRUSHER
three sizes turn out bales



Two conveyors, one located above the other, and both operating in the same direction, comprise the Cyclomatic box crusher. The top belt operates at a 25-degree angle and the lower belt is horizontal. Boxes are crushed as the conveyors converge, then are formed into a bale in a baling chamber. Each three-ply, tear and abrasive-resistant belt is powered by a 1-hp electric motor and 45-rpm Class III gearmotor. Feed openings of 36, 48, and 60 in. are offered. Made by **East Chicago Machine Tool Corp.**, Balemaster Div., Dept. E, 4801 Railroad Ave., East Chicago, Ind.

▲ For more details circle NED-420 B8 on enclosed inquiry slip ▲

POWER-OPERATED RAMP
extends outward to transport vehicle



Installed in a shallow pit in new or existing docks, the Extendock power-operated ramp extends outward to transport vehicle for easy transfer of fork or other industrial trucks. Compressed-air cylinder controls extension or retraction, whereas single-acting hydraulic cylinder raises and lowers outboard end. Ramp can float up or down with changes in vehicle height, or can independently support loads up to 10,000 lb. High-traction steel surface plate minimizes possibility of slippage. Three available models have 60 in. width and 10,000 lb capacity. Largest Model 60 extends 60 in., raises 13 in. and lowers 9 in. Offered by **A. J. Bayer Co.**, Dept. EX, 2300 E. Slauson Ave., Los Angeles 58, Calif.

▲ For more details circle NED-421 B8 on enclosed inquiry slip ▲

"WE PREFER CLAUSING VERTICAL MILLS FOR ALL WORK WITHIN THEIR CAPACITIES!"

The new CLAUSING VERTICAL MILLER is the most accurate machine of its type. The spindle head can be swiveled in a vertical plane and set at any angle, and the turret rotated in a horizontal plane making it possible to mill, drill, bore, ream and shape at all angles with one work set-up.

"Our men prefer Clausing vertical mills for all work within their ½" cutter capacity. They're certainly as accurate as larger machines, and they are far more efficient . . . work set-up is easier, they're easier to get around, and they're far more sensitive."

The Progressive Machine and Tool Company

CONDENSED SPECIFICATIONS

Size of Table	6" x 24"
Longitudinal Table Travel	15"
Transverse Table Travel	5"
Vertical Table Travel	11⅝"
Maximum Distance Spindle to Column	8¾"
Quill Travel	3"

Write For Literature

CLAUSING DIVISION ATLAS PRESS COMPANY
2-113 N. Pitcher St., Kalamazoo, Michigan

▲ For more details circle NED-422 B8 on enclosed inquiry slip ▲

FLEXIDYNE

THE DRY FLUID DRIVE

NEW! REVOLUTIONARY!

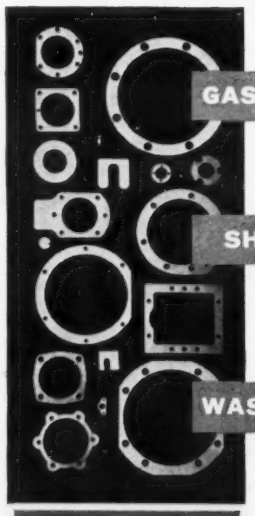
Handles difficult starting problems and gives a *new* kind of protection against shock and overloads. The dry flow-charge can be varied to give exact torque you need. When load reaches normal speed there is zero slip, giving 100% efficiency. Write for bulletin with detailed information on Flexidyne Drives and Flexidyne Couplings.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE
of Mishawaka, Ind.

▲ For more details circle NED-423 B8 on enclosed inquiry slip ▲

No Order TOO SMALL... or TOO BIG!



With more than 50 years' accumulation of dies, chances are we can furnish the gaskets, shims, or washers you need . . . *without a die charge*. This can cut your cost and speed delivery—whether you need just a few items or large quantities. Gaskets, shims, washers or special stampings are available in metallic, non-metallic and plastics to meet your production requirements.

NOW...WIL-PAK PLASTIC SHIM STOCK with thickness identified by color and gauge number. Write for Bulletin No. 570.

Write for Catalog and prices

CHICAGO-WILCOX Mfg. Co.
7713 South Avalon Avenue
Chicago 19, Illinois

▲ For more details circle NED-424 B8 on enclosed inquiry slip ▲

Commander
SELECT A SPINDLE
DUAL SPEED DRILL PRESS TURRET
DRILLS, REAMS, TAPS ON 1 DRILL PRESS SPINDLE!

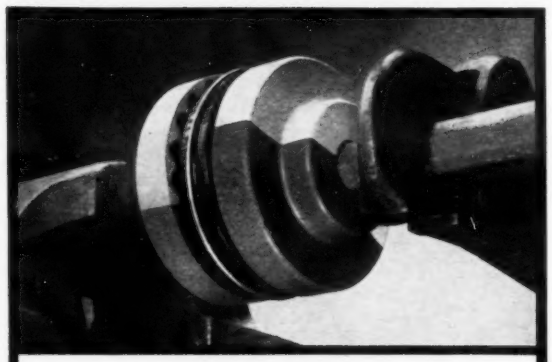
- Fits Any Drill Press
- Increases Production
- Reduces machine, fixture costs

Commander Select-A-Spindle permits you to do 3 operations on a single drill press spindle . . . save time . . . eliminate multiple handling of piece parts, speed production and reduce overall costs. Dual Speed Select-A-Spindle permits selection of proper speed for each operation. Quick, positive hand indexing positions each tool accurately for sequence operations. Select-A-Spindle is built to tap with any 1, 2 or all 3 spindles to the full capacity of the unit. Adjustable torque control spindles for protection of taps to ¼" available.

Write for illustrated circular on Select-A-Spindle, other Commander Production Tools and name of your nearby Commander Distributor

Commander MFG. CO.
4220 W. KINZIE STREET, CHICAGO
PRODUCT OF COMMANDER . . . BUILDER OF PRODUCTION TOOLS

▲ For more details circle NED-425 B8 on enclosed inquiry slip ▲



NEW, SIMPLE, SURE-FLEX COUPLINGS END SHOCK AND MISALIGNMENT PROBLEMS

New Sure-Flex Couplings have exceptional torsional flexibility . . . assuring greater absorption of shock and vibration . . . resulting in longer motor and machine life. They withstand all combinations of misalignment and end-float, are simply designed, easily installed and unaffected by abrasives, dirt or moisture. There is no wear, no need for lubrication or maintenance. Write for Bulletin No. 10100.

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA

▲ For more details circle NED-426 B8 on enclosed inquiry slip ▲

Insulator Stack Deflection Test
... another example of the versatility of Dillon Dynamometers

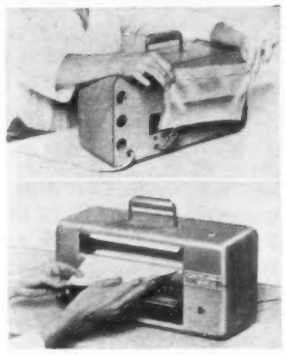
When Victor Insulators Div. of I-T-E Circuit Breaker Company set up insulator stack deflection tests, they use a compact Dillon Dynamometer. In this most critical test, the Dynamometer accurately measures the cantilever load required to record a true deflection reading.

This is just another example of the many jobs Dillon Dynamometers are doing today in every conceivable industry. Available in 13 capacities from 0-500 to 0-100,000 lbs., these precision instruments quickly and positively indicate torque, weight, tension, traction, compression. Capacities up to 20,000 lbs. weigh only 8½ lbs., yet all are husky and rugged. Dillon Dynamometers are individually calibrated, overload protected, equipped with max. pointer, unaffected by temperature—*unconditionally guaranteed!* 5" or 10" dials avail. Write today for fully illustrated brochure & low price schedule.

W. C. Dillon & COMPANY, INC.
14578NE Keswick St., Van Nuys 1, Calif., (suburb of Los Angeles)

▲ For more details circle NED-427 B8 on enclosed inquiry slip ▲

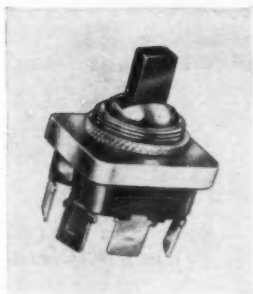
PHOTOCOPIER
uses premixed liquids in cartridge



Continuous Contoura-Portable photocopying machine uses a plastic cartridge in which processing liquids are premixed. Container is snapped into place so that it pours in and out of the machine automatically. This airtight cartridge adds to the liquid life, as it does not contact air when not in use. Machine is 15 in. wide by 6 in. deep and weighs under 12 lb. It turns out four copies per minute, or a single copy in 25 seconds. Copies are made on white, colored, or transparent paper, as well as on film for offset plates and projection transparencies. Any type of mark or form can be copied. Made by **F. G. Ludwig, Inc.**, Dept. C-M, 103 Coulter St., Old Saybrook, Conn.

▲ For more details circle NED-428 B8 on enclosed inquiry slip ▲

TOGGLE SWITCH
provides three-position operation



Single - throw two - position on-off, double-throw two-position on-on, and double-throw three-position on-off-on are three circuit arrangements provided by type 2050 flush-mounting toggle switch. Rated 15 amp 125 v and 7½ amp 250 v ac, switch can also be furnished for 3 or 6 amp 125 v ac, or 20 amp 250 v ac. Long or short phenolic toggles, black or colored, can be furnished as well as bat-type or barrel-type metal handles to meet specifications. Binding-head screws, solder-type, or Ark-les Quick-connect type terminals can be supplied. Made by **Ark-les Switch Corp.**, 42 Water St., Watertown 72, Mass.

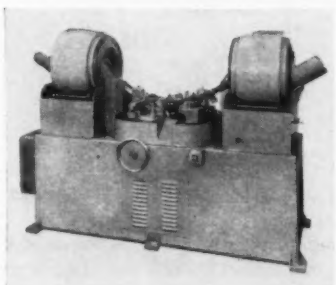
▲ For more details circle NED-429 B8 on enclosed inquiry slip ▲

SLOTTING CUTTERS
for general-purpose milling

Flat-faced HSS blades rigidly held in cutter body with wedges are featured in the WAF line of narrow, staggered tooth, slotting cutters. Used for general-purpose milling, cutters are made with two keyways in the hub. This allows lining up the side teeth on adjacent sides when two cutters are used for straddle milling of thin parts. Also, two or more cutters of the same outside diameter can thus be interlocked and used together. Widths range from ⅜ to 1 in.; diameters, from 4 to 16 in. Units up to ⅝ in. wide have extended hubs. Radial set-out is made in 1/16-in. increments. Made by **Goddard & Goddard Co.**, 12284 Burt Rd., Detroit 23, Mich.

▲ For more details circle NED-430 B8 on enclosed inquiry slip ▲

THREAD ROLLING MACHINE
rolls 600-800 bolts, screws per min



Screws, bolts, and nails are thread rolled at speeds of 600 to 800 pieces per minute by Model 125A planetary thread rolling machine. Overall blank stock lengths up to 3 in. and diameters from No. 4 to 5/16 in. can be handled. Machine performs thread rolling, roll forming, knurling, marking, serrating, and necking. It features rear loading during production, cradled hopper with external drive free of obstructions, end mounted vibrator, hardened and ground feed rolls, rapid adjusting feed rail width, micrometer feed-rail positioner, expanding die mandrel, and a thinwall ring die that can be set up to perfect concentricity. Made by **Prutton Corp.**, 5297 W. 130th St., Cleveland 30, Ohio.

▲ For more details circle NED-431 B8 on enclosed inquiry slip ▲

Install PLATECOIL heat transfer units and save up to 50% on installation and maintenance costs. With "spare" PLATECOIL units, you can eliminate down time needed for cleaning pipe coils. Simple connections and "quick-change" hangers make changing PLATECOIL units fast and easy. Use "spare" while other units are being cleaned. Cleaning is easier, too, with PLATECOIL. Wide selection of sizes, styles and metals to fit your needs.

SEND FOR FREE BULLETIN P57.

TRANTER MANUFACTURING INC.
LANSING MICHIGAN

PLATECOIL® DIVISION

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...SWITCH TO
MONARCH
SOLID TIRES

Savings in materials handling expenses are of maximum value in this era of spiraling costs. That is why dollar-conscious lift truck users are switching to MONARCH industrial solid tires. They have found that MONARCH tires provide superior wear resistance at competitive prices . . . reduce replacement costs . . . assure long-range savings.

Made from special Compound T-48C, the toughest natural rubber stock developed to date, MONARCH solids are produced by industrial tire specialists in types and sizes for every lift truck job.

Ask your Monarch dealer, or write direct, for our new 16-page CATALOG MR-457. It's full of facts, specifications and suggestions to help you save more on solid tires.

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO

- 7-255 General Motors Bldg., Detroit, Mich.
- 1035 Bartlett Street, Hayward, Calif.

▲ For more details circle NED-433 B8 on enclosed inquiry slip ▲

Washette by Cook

AIDS AMERICAN INDUSTRY

Washette has proved its usefulness in factories, plants, mine and construction camps . . . *anywhere* laundry must be done quickly, efficiently, economically. Superb engineering, stainless steel construction, automatic controls . . . Washette gives *life-time* of trouble-free service.

Washette is America's finest open-end washer, *and the lowest priced!*

Washette by Cook is authorized to display the Canadian Seal of Approval.

Why Washette is America's Leading Open-End Washer

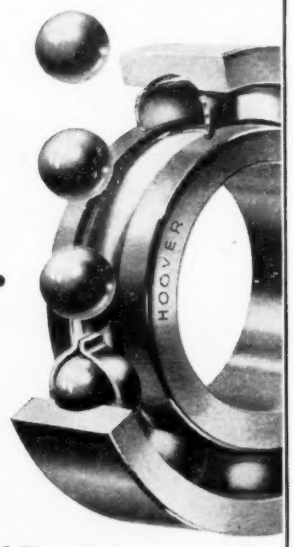
- Especially trained operators unnecessary
- Both AC and DC models available
- Fully Automatic Controls
- Parts Standard, available anywhere

FOR LITERATURE, PRICES AND DISTRIBUTORS, CONTACT

COOK MACHINERY CO., INC.

4122-T COMMERCE ST. DALLAS 26, TEXAS

▲ For more details circle NED-434 B8 on enclosed inquiry slip ▲



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Hoover Honed Raceways

which are not only ground, but also fully honed with a unique process developed and used only by Hoover. The result: super smooth, superbly finished raceways of microscopic accuracy and perfection.

Micro-Velvet Balls

made of the finest of selected high carbon chrome alloy steel, uniformly hardened throughout, then surface finished so perfectly that roundness and diameter are accurate within *millionths* of an inch! The gleaming surfaces are absolutely free of even the tiniest of defects.

Perfectly Matched

ball complements that are fitted into perfectly matched raceways . . . a final quality step that pays off in maximum load capacity, hushed quietness and extra long life. Bearing types available: single row, single and double shield, combination felt seal and shield, double row, cartridge, single and double contact seal

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Please mail my copy of the Hoover Handi-Book of Anti-Friction Bearings

Name _____

Title _____

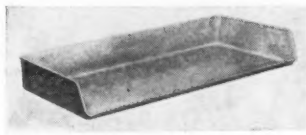
Company _____

Address _____

City _____ State _____

▲ For more details circle NED-435 B8 on enclosed inquiry slip ▲

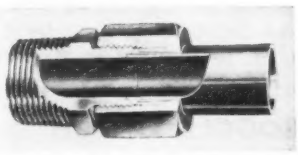
CONVEYOR ASSEMBLY TRAY
molded from reinforced resin



Glass fiber reinforced polyester resin conveyor assembly tray is strong, durable, and lightweight for assembly line use. It resists oil, grease, water, and most chemicals, and will not shatter or dent. Top flange is reinforced with an embedded wire rim for strength and rigidity. Tray's size of 45 x 19 x 5 in. and its low cut front make it practical for assembly operations, or for placing on portable racks to convey parts to the assembly line. Made by **G. B. Lewis Co.**, 20 Montgomery St., Watertown, Wis.

▲ For more details circle NED-436 B8 on enclosed inquiry slip ▲

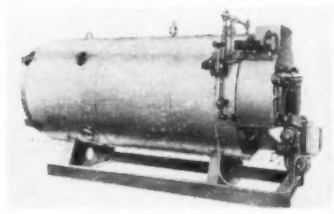
HYDRAULIC FITTINGS
1/8 to 2-in. pipe and hose sizes



Line of AFCO industrial hydraulic fittings for tube, pipe, and hose includes sizes from 1/8 to 2 in. Fittings are available in steel, brass, aluminum alloy, or stainless steel. Both straight bodies made from bar stock and the shaped bodies made from forgings are machined to JIC hydraulic standards. Made by **AFCO Fitting Co.**, Dept. NED, 5300 Harvard Ave., Cleveland, Ohio.

▲ For more details circle NED-437 B8 on enclosed inquiry slip ▲

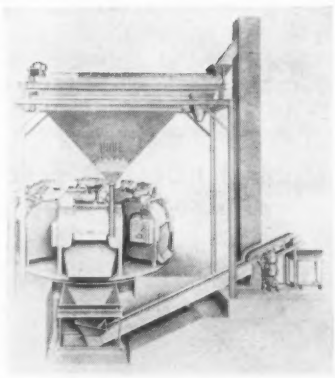
PACKAGED BOILERS
high and low pressure types



Completely integrated Kewanee-Iron Fireman boiler-burner units are factory assembled for packaged installation. They consist of boiler, burner, blower, controls, fittings, and trim. Automatic forced-draft units require only a vent pipe regardless of boiler room location or atmospheric conditions. They are available in eight sizes for 125 to 150-psi service in ratings of 18 to 92 hp, and in eight low pressure sizes for 15-psi steam or 30-psi water service in range of 606,000 to 3,060,000 Btu per hr. Burner features complete carbureting of No. 5 oil or lighter and, on combination gas-oil firing, quick fuel changeover with simple valve. Boiler meets ASME Code, and burner is UL-listed. Made by **American-Standard**, Kewanee Boiler Div., 101 Franklin St., Kewanee, Ill.

▲ For more details circle NED-438 B8 on enclosed inquiry slip ▲

AUTOMATIC BARREL FINISHER
6-station system enables one man to handle 6 or 12 barrel finishers



Mounted on a turntable and equipped with a memory device, this 6-station automatic barrel finishing system enables one operator to handle six barrel finishers, or twelve where two systems are combined. Each barrel finisher is loaded with parts, media, and compound at a single work station. Completed work is also automatically returned to it for rinsing and mechanical separation.

As operator loads each barrel, he sets timer for prescribed processing cycle. This also records time cycle on turntable memory device which signals the timed-out barrel and rotates it to operator station when work is completed. System will simultaneously deburr and finish a variety of ferrous and nonferrous parts requiring varied time cycles. Continuous processing from 15 minutes to 50 hours can thus be performed automatically.

Many types and sizes of barrel finishers can be mounted, allowing as many as ten machines on one turntable. Made by **Almco, Queen Products, Inc.**, Dept. N, Albert Lea, Minn.

▲ For more details circle NED-439 B8 on enclosed inquiry slip ▲

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine . . . protects concrete, brick, plaster, tile, wood or composition surfaces.

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32-PAGE NoDrip DATA HANDBOOK

Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses

J. W. MORTELL COMPANY 520 Burch St., Kankakee, Ill.

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COMPLETE DETAILED SPECIFICATIONS
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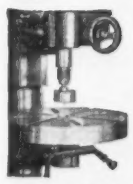
JERGENS TOOL SPECIALTY CO.

Dept. NE-2, 712 E. 163rd St., Cleveland 10, Ohio

▲ For more details circle NED-441 B8 on enclosed inquiry slip ▲



Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from 9/16" to 6" diameter through steel up to 1⅛" thickness. Extra cutting quality and high-speed-steel, self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

Write for Hole Saw Catalog Sheets.

MARVEL Metal Cutting SAWS — Better Machines—Better Blades

ARMSTRONG-BLUM MFG. CO.

"The Hack Saw People"

5700 Bloomingdale Ave. Chicago 39, U.S.A.

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Get the most out of your investment in precision machinery—protect it with standard Bokum solid carbide boring tools, designed especially to produce close tolerance holes without taper.

The head, cutting grade carbide for fine finishes at high surface speeds, is ground by the Bokum principle to maintain constant radial and helical clearance angles. It is solidly brazed to another grade of carbide, selected specifically for maximum strength and rigidity with minimum springback.

This combination gives you the perfect boring tool for your finest work. It is available from stock in a complete line of standard sizes.

Write Dept. T today for catalog 948.
It's packed with information you can use.

TRADE MARK REG. U. S. PAT. OFF.

BOKUM TOOL CO. INC. 14775 Wildemere Ave. Detroit 38, Mich.

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TONG TEST is the only instrument of its type that measures both alternating and direct current. Press trigger and snap tongs around the electrical conductor for an instant reading, without shutting down equipment. Interchangeable ranges up to 1000 amperes; impossible to read the wrong scale.

Rugged and dependable, safe and accurate. No coils or wires to burn out. Thousands of TONG TEST AMMETERS in use after more than 25 years of active service. Five types available for conductors up to 3¾" diameter, or bus bars up to 4½" x ½".

Write today for Catalog ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO

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TIME YOUR TESTS IN SPLIT-SECONDS!

GRA LAB

ALL PURPOSE INDUSTRIAL TIMERS

MODELS AT $23.95 TO $29.95

You can set the large 8" dial for any desired time period within an unusually wide range of 3600 possible settings, (i.e., 1 sec. to 60 min., 1 min. to 60 hrs., etc.). At end of preset interval, alarm sounds and external load is automatically switched on or off.

Gra-Lab Micro Timers, **Electric Stop Clocks**, are available in 1/10 sec. or 1/1000 min. graduations for split-second measurements of elasped time in laboratory or production operations, Price $37.50

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DIMCO-GRAY COMPANY 203 E. Sixth St. DAYTON 2, OHIO

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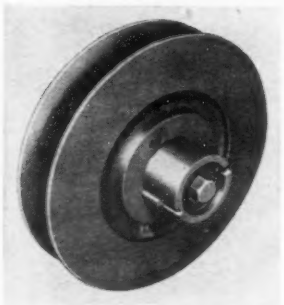
FACTORY ASH TRAY
mounts on wall, post, or column

Model 4J Sipco Dunking Station, an ash tray designed for factory use, is permanently mounted on walls, posts, or columns in washrooms or other factory areas. Its cannister cannot be lifted off the bracket, preventing pilfering. Cleaning is by removing a molded glass fiber inner liner which fits inside the cast aluminum jumbo cannister. Inner liner is partly filled with water and will fit all Jumbo-size cannisters. The Model 4J unit is offered with a bright polished finish or standard black crinkle finish. Made by **Standard Industrial Products Co.**, Dept. D, 920 N. Garfield Ave., Peoria, Ill.

▲ For more details circle **NED-446 B8** on enclosed inquiry slip ▲

VARIABLE PITCH SHEAVE
has range of 5.5 to 120 in.



Compact S-section Vari-Pitch sheave has a range of 5.5 in. minimum to 120 in. maximum. It complements the present wide-range Q and R-section Vari-Pitch and companion sheave line. Companion sheaves with Magic-Grip bushings in sizes from 8 to 24-in. pitch diameter are available, along with S-section belts in 54 to 150-in. lengths. The S-section belt has a maximum width of 2 1/16 in. which is wider than Q or R-section units. New S-section sheave requires no more mounting space than the smaller R-section, one-groove sheave. Made by **Allis-Chalmers Mfg. Co.**, 918 S. 70th St., Milwaukee 1, Wis.

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SOCKET-HEAD CAP SCREWS
features chip-free, perfect socket

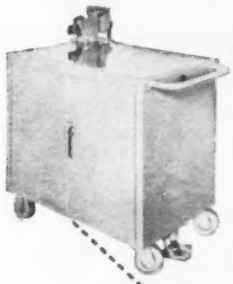
A perfect - hole socket, featured in line of cold-forged socket - head cap screws, assures maximum strength and full gripping area on hex keys. Greater strength is added to the entire screw by company's own isothermal heat treating. Screws are available in sizes No. 8 to ⅝ in. diameter in alloy steel. To introduce the line, a sampler puzzle package called "Bullseye" is offered free to cap screw buyers or specifiers who write directly to: **Set Screw & Mfg. Co.**, 130 Main St., Bartlett, Ill.

▲ For more details circle **NED-448 B8** on enclosed inquiry slip ▲

VARIABLE TRANSFORMER
delivers 1.5 amp at any setting

No larger than units handling less current, Model VT-1R5 variable transformer delivers 1.5 amp at any brush setting, even at full overvoltage. A pigtail shunts current from brush directly to large copper graphite slip ring. Springlike brush arm provides its own contact pressure. Ceramic hub aligns and mounts brush arm and provides 3000 v ac insulation between parts at line potential and the shaft assembly. Reversible, direct-reading dial is calibrated to 120 on one side; 132 on the other. It allows direct setting to desired voltage for line or overvoltage connection. Made by **Ohmite Mfg. Co.**, 3667 Howard St., Skokie, Ill.

▲ For more details circle **NED-449 B8** on enclosed inquiry slip ▲



here today...

Portable workbench can be rolled to work location by one man. Doors can be locked to fully protect all contents. Unit is all-welded 1/8-inch and 3/16-inch steel plate construction . . . and can support up to 2000-pounds safely. Heavy-duty roller bearing wheels (hard rubber or phenolic resin) are furnished. Foot-operated locking mechanism securely positions workbench.

Standard "Roll-A-Bench" weighs 325-pounds and is 34-inches high, 41-inches long and 26-inches wide. Other sizes are available to meet individual requirements. *Write today for literature.*

there tomorrow!

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MOBILE WORKBENCH

Several territories available for qualified manufacturer's representatives or distributors. Write today for information.

6755-OK

THE OVERBEKE-KAIN COMPANY
20979 Aurora Road • Bedford, Ohio

Overbeke-Kain

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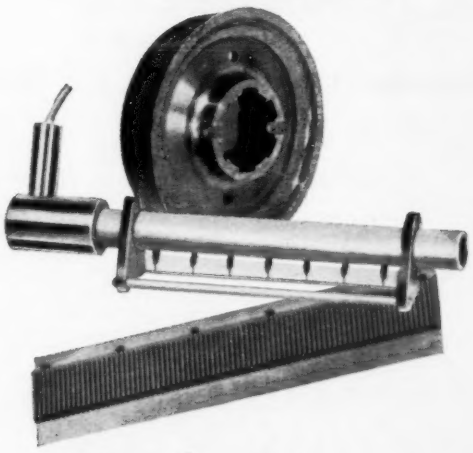
NEED FABRICATED INDUSTRIAL PLASTICS?



You furnish the print... we'll furnish the part!

Laminated plastics are not difficult to machine but in our over 25 years of working with them we have acquired or invented many special techniques, machines and tools to do the job.

There are certain speeds, feeds, cutters, clearances, and allowances that work better with laminates. There are many little tricks and kinks for sawing, turning, drilling, milling, punching, and threading that help make a better product or save money.

If you gather from this that it might be well to let us handle the job from your print to part, you're right.

In brief, Synthane is completely equipped to handle all of your fabricating problems.

SYNTHANE — SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

☐ Please send me information about Synthane Fabrication Service.

Name _____
Address _____
City _____ Zone ____ State _____

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New Plastic Material! Repairs Floor Cracks!

A new plastic material formulated for the specific purpose of repairing floor cracks and preventing surface deterioration is announced by The Monroe Company, Inc., Cleveland.

Before

After

Known as "Jiffy Floor", it is a fine granular, ready-to-use plastic product that can be applied without interfering with production or traffic. It readily fills hairline cracks, shallow holes, spalled floors or expansion joints. Immediately after application, it will withstand heaviest loads.

Jiffy Floor contains no asphalt, cement, sand or gravel. It will not crack, crumble or curl . . . is not affected by temperature changes . . . can be applied indoors or out.

Jiffy Floor is waterproof, dustless, skidproof and noiseless. Available in 5-10-30 and 55-gallon drums, ready for easy use. For further information, write *The Monroe Company, Inc., 10707 Quebec Avenue, Cleveland 6, Ohio.*

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Your parts last longer when they're

SHENANGO CENTRIFUGAL CASTINGS

Your machine parts, ferrous or non-ferrous, are subject to stress, strain and friction, day after day, year after year . . . so specify Shenango . . . and see what a difference this makes!

Shenango's centrifugal casting process insures longer life because of finer, more uniform, *pressure-dense* grain to begin with . . . free of inclusions, porosity, blowholes and other weakening defects. Then, far less machining is needed and your part is stronger . . . to last and last *and last!*

Shenango's modern and fully-equipped shops will supply you with ferrous or non-ferrous symmetrical parts in virtually any shape or size . . . rough, semi-machined or precision-finished to your most exacting specifications. For full details, write: *Centrifugally Cast Products Division,* The Shenango Furnace Company, Dover, O.

SHENANGO CENTRIFUGAL CASTINGS

COPPER, TIN, LEAD, ZINC BRONZES • ALUMINUM AND MANGANESE BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL • ALLOY IRONS

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RUGER CRANES

Ruger Hydraulic Cranes reach in-under-over . . . unload trucks . . . lift motors, machinery and crates . . . lay pipe . . . tilt drums . . mate dies . . . combine all your lifting and transporting problems into one operation. Manual and electric models available are floor . . truck . . . convertible floor and truck . . short mast . . high mast . . . wide base . . adjustable legs and retractable outrigger for side lifting. Send today for descriptive literature.

THE CRANE WITH 1000 USES

RUGER

RUGER EQUIPMENT, INC.
619 West Fourth Street • Uhrichsville, Ohio

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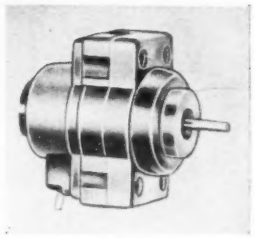
WIRE BUNDLE SHIELDING made of flexible zippered tubing

Shielded Zippertubing consists of a laminated type of flexible tubing with a zipper type fastener. Tubing material is plastic impregnated glass fiber backing laminated to aluminum, lead, or magnetic foil. This metal lining permits grounding radio and ultrahigh frequency interference. It affords a shielded casing for multiconductor wiring or cables in aircraft, missile, electrical, and electronic equipment. Slide fastener facilitates installation and affords instant access to cables or wires. Sizes in increments of 1/8 in. range upward in diameter from 3/8 in. in wall thicknesses of 20, 40, and 60 gage. Made by **Zippertubing Co.,** 752 S. San Pedro, Los Angeles 14, Calif.

▲ For more details circle **NED-455 B8** on enclosed inquiry slip ▲

MINIATURE MOTORS units rated up to 1/50 hp



Rated from 1 to 24 v and up to 1/50 hp, line of miniature and subminiature motors includes models to meet specific requirements. The permanent magnet type shown is rated 1-6 v, 230-340 ma. It runs on 1½ v at 5000 rpm. Nylon bearings are quiet and require no lubrication. Motors priced as low as 20 cents each in quantities are available from **Moen Trading Co.,** 7 W. 24th St., New York 10, N. Y.

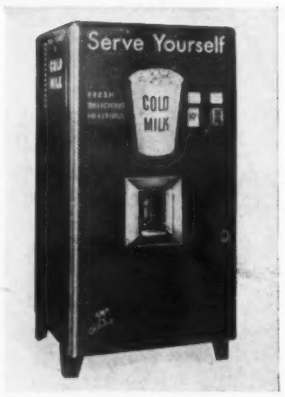
▲ For more details circle **NED-456 B8** on enclosed inquiry slip ▲

SPOT FUMIGANT APPLICATOR kills insects in industrial plants

Control of insect infestation in food and processing systems is simplified with use of this Spot Fumigant Applicator. The portable unit will handle any gasifying liquid fumigant which it injects into the desired area as a finely atomized mist. The mist vaporizes almost immediately, penetrating into cracks, crevices, and seams of flour, grain, and ingredient handling conveyors. The 5-gal stainless steel tank is equipped with stainless braided discharge hose lined and covered with vinyl. With 35 to 50-psi air pressure in tank, 1 oz of fumigant is discharged every 6 seconds. Made by **Arwell, Inc.,** Dept. NE, 1119 Glen Rock Ave., Waukegan, Ill.

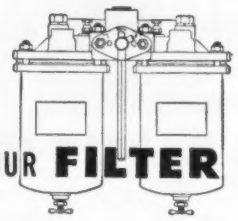
▲ For more details circle **NED-457 B8** on enclosed inquiry slip ▲

MILK DRINK DISPENSERS serve up to 380 drinks



Two vending machines are available for dispensing either plain or flavored milk and a premixed chocolate shake drink with a milk base. Both the milk and the shake venders serve drinks in cups at temperature of 32 to 33° F. All drinks including plain milk, are aerated between the bulk tanks and the cup during dispensing to improve flavor. Refrigerated cabinets are lined with stainless steel. Stainless cup port is removable for sanitizing. Each vender holds two 5-gal or two 10-gal cans of product for serving up to 380 drinks between restocking calls. They adjust to serve any size drink. Venders measure 69 x 34¼ x 27 in. Made by **Glascock Bros. Mfg. Co.,** Muncie, Ind.

▲ For more details circle **NED-458 B8** on enclosed inquiry slip ▲



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Coolants on lathes and grinders	Hydraulics	Fuels
Paints, varnishes and lacquers	Toothpastes	Waxes
Sugar, confections and syrups	Cup greases	Drugs
Refrigerating fluids	Lubricants	Acids
Coating materials	Chemicals	Inks
Food Products • Beverages	Gasoline	Air

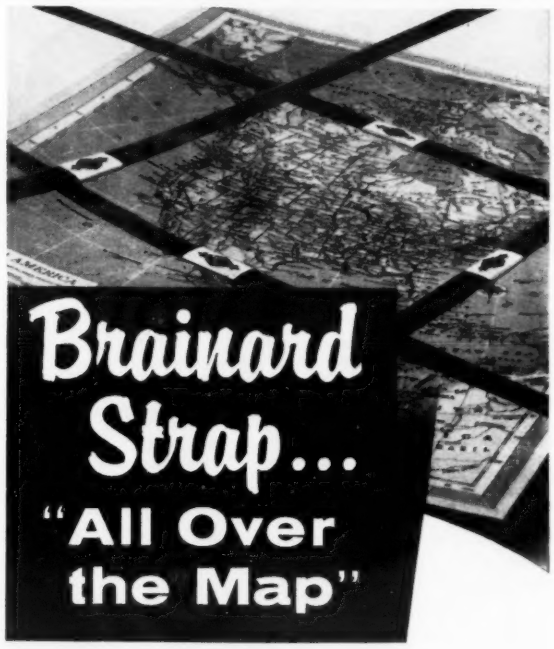
Purolator's comprehensive Filter Catalog will give you valuable technical assistance in a wide range of liquid and semiliquid filtering applications. Send for your free copy. Or submit your particular filter problem to the designing and manufacturing experience of the oldest filter manufacturer in the United States. No obligation, of course.

Filtration For Every Known Fluid

PUROLATOR PRODUCTS, INC.

Rahway, New Jersey and Toronto, Ontario, Canada

▲ For more details circle **NED-459 B8** on enclosed inquiry slip ▲



WAREHOUSES
Strategically placed throughout the United States and Canada, insure quick delivery of tensional and heavy duty strapping as well as tools and other strapping supplies.

POWER TOOLS
For stretching and cutting both heavy duty and tensional strapping, the latest development in modern production strapping.

QUALITY STRAPPING
As a division of Sharon Steel, Brainard's integrated production insures a constant supply of high quality, heavy duty and tensional strapping in all standard sizes and gauges.

Brainard's Steel Strapping is more than a product, it is a system of specifically designed tools and accessories for the most modern of packaging and material handling. Brainard's Strapping service is available throughout the United States and Canada.

Brainard Steel Strapping

SHARONSTEEL

Brainard Steel Division, Sharon Steel Corporation
Larchmont Avenue, Warren, Ohio 569-A

▲ For more details circle **NED-460 B8** on enclosed inquiry slip ▲

use this NEW DURANT MODEL "X"

WHEN

1. The COUNT must be accurate
2. VISIBILITY is very IMPORTANT
3. LONG LIFE is a requirement
4. DEPENDABILITY is demanded
5. DUST and MOISTURE conditions prevail
6. YOUR NEEDS are for MANY
7. COST per unit must be LOW

Exclusive FEATURES . . .
• Single rigid Die Cast Frame • Tongue and Groove Seal against dust seepage • Nylon Drive Parts for longest life • Recessed Window protected from bumps and knocks • Largest, clear-cut, no-squint Numbers

● Developed particularly for design engineers to incorporate in business machines, duplicators, card sorting equipment, hay balers, light press machines and similar equipment.

Send for Bulletin

DURANT MANUFACTURING COMPANY
1922 N. Buffum St. Milwaukee 1, Wis.
22 Thurbers Ave. Providence 5, R. I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 Count Everything

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FAST DELIVERY on NOPAK shelf-stock AIR CYLINDERS!

Your choice of —
• 6 Mounting Styles
• 8 Bore Sizes
• 9 Stroke Lengths

When you specify NOPAK "Shelf-Stock" Air Cylinders you save money 3 ways:
1. You eliminate waiting for "specials".
2. You reduce engineering costs.
3. You get top quality NOPAK Air Cylinders at the lowest possible prices.

NOPAK "Shelf-Stock" Air Cylinders are available in a wide range of bore sizes and stroke lengths from 1½" x 1" to 8" x 15". No other manufacturer offers such a wide range of selection in Brass Tubing, Precision Machined, Cushioned Air Cylinders at comparable prices.

MODEL "E" with Clevis and Mounting Bracket

NOW! 5" BORE replaces the 4½" bore in the NOPAK Shelf-Stock line, with no price change — extra cylinder power at no extra cost. Compare quality and prices, and you'll specify NOPAK. Write for Current Listings and Catalog 101.

GALLAND-HENNING NOPAK DIVISION • 2755 S. 31st St., Milwaukee 46, Wis.

NOPAK VALVES and CYLINDERS

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get this valuable HIGH pressure pump data from John BEAN

If your pumping requirements involve pressures from 100 to 6000 psi, temperatures up to 300°F, you'll find John Bean's pump literature extremely helpful. Get these data-packed bulletins for handy finger-tip reference . . . or avail yourself of John Bean trained and experienced engineers for immediate action.

FREE

L-1166 Triplex Pumps, inside packed
L-1167 Triplex Pumps, outside packed
L-1168 Triplex Power End for industrial reciprocating pumps
L-1125 Vertical Duplex Pumps
L-1169 John Bean Pump Accessories
L-1106 Aquablast High Pressure Washers
ALSO CUSTOM DESIGNED PUMPS

SEND INFORMATION REQUEST FORM TODAY
(Please list catalog number wanted)

fmc FOOD MACHINERY AND CHEMICAL CORPORATION
John BEAN Division of Food Machinery and Chemical Corporation
INDUSTRIAL SALES DEPT.
LANSING 4, MICHIGAN SAN JOSE 1, CALIFORNIA

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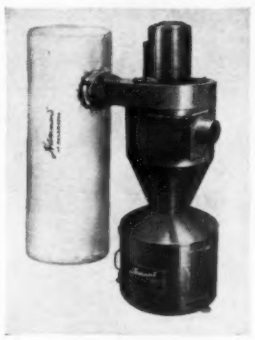
ATTENUATORS
for development and testing work

Operating in the frequency range from direct current to 600 kc, Alectra 40 Series pushbutton carrier voltage attenuators are designed for use in laboratory development work and testing of electronic equipment. Pushbuttons select values of attenuation from 0 to 82 db in 1-db steps. They are calibrated for operation in 600-ohm circuits. The attenuator configuration is unbalanced in the 40A and balanced in the 41A models. Made by **Consolidated Electrodynamics Corp.**, Alectra Div., 325 N. Altadena Dr., Pasadena, Calif.

▲ For more details circle NED-464 B8 on enclosed inquiry slip ▲

DUST COLLECTOR
400 and 600-cfm capacities offered



Standard line of Cyclone DusKolectors is supplemented by a 53-in. high Junior model, available in 400 and 600-cfm capacities. It uses centrifugal precipitation and gravitation for the removal of larger particles which are deposited in a removable receptacle in the base. Smaller particles are exhausted outdoors or trapped in a bag attached to the outlet. Bag is easily removed and has a zipper for quick cleaning. Mounting of the blower wheel on the exhaust side prevents clogging when sticky or stringy materials are being collected. Unit can be caster-equipped for portable use. It is suited for collecting dust from light and medium dust-creating sources. Made by **Hammond Machinery Builders, Inc.**, 1623 Douglas Ave., Kalamazoo, Mich.

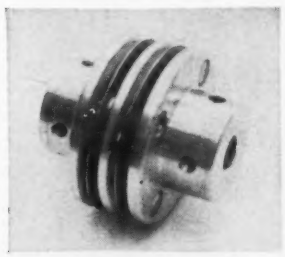
▲ For more details circle NED-465 B8 on enclosed inquiry slip ▲

ELECTRIC PENCIL POINTER
makes uniform drawing pencil points

Small synchronous motor in the Point-O-Matic electric pencil pointer drives a fine sanding disk to make uniform points on drawing pencils. It sharpens leads of semiautomatic mechanical drawing pencils or leads of wooden pencils which have been first turned down in draftsman-type pencil sharpeners. A spring-loaded switch operates the motor when a pencil is inserted and turns the motor off when it is withdrawn. The pencil is rotated once after insertion and carbon dust is collected in an isolated recess. Price is $14.95. Made by **Johnson Mfg. Co.**, 134 Main St., Monroeville, Ind.

▲ For more details circle NED-466 B8 on enclosed inquiry slip ▲

MINIATURE COUPLINGS
flexible type for clutches, brakes



Flexible connection for Dial miniature electromagnetic clutches and brakes is provided by two miniature flexible coupling models, each offered in two sizes ranging from 15/16 to 1 5/16 in. OD. They accommodate shaft diameters from ⅛ to ½ in. and transmit 30 to 45 lb-in. torque at high speeds. Requiring no lubrication, the torsionally-rigid couplings provide a smooth, constant drive with no backlash. They absorb angular misalignment up to 7½ degrees, lateral misalignment up to 0.015 in., and axial movement up to 0.060 in. in a single unit. Vibration is also effectively dampened. Modifications in mountings, fitting, and materials are made to meet individual requirements. Made by **Dial Products Co.**, Dept. S, 9 Avenue E, Bayonne, N. J.

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for as little as $22.00 COMPLETE IN U.S.A.

for this production boosting 'TRICO-MIST' COOLANT SYSTEM

For drilling, tapping, milling, sawing, grinding, etc. Removes heat from cutting edges of tools and work. Feeds can be increased considerably, finer finishes and accuracy are obtained. TRICO-MIST absorbs heat, thereby quenching it faster than flood coolants which only transfer it. Chips slide freely up the tool face and are blown away automatically.

Simple needle valve controls size and volume of mist spray. Attaches to shop air line. Available with one and five gallon containers—single or multiple outlets—single or dual valve control.

SEND FOR BUL. 37-A

GET FACTS

TRICO FUSE MFG. CO. Milwaukee, Wis.

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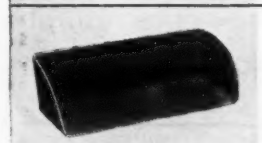
For longer lifting life . . .

STYLE A—These buckets are commonly used on elevators handling coal, grain, cement, chemicals, pulp and similar materials. Available in a range of sizes and capacities.

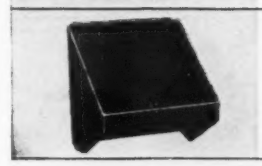
STYLE AA—Designed for longer life on same type of materials as Style A buckets. These buckets are recommended for especially heavy and gritty materials such as sand, gravel and stone.

STYLE AA-RB—Elevate same materials as Style AA. These are recommended for extra-heavy service conditions. Buckets feature double-thickness backs, wide digging lip and reinforced ribs.

STYLE B—Widely used for handling coke, ores, stone, and other coarse materials. Buckets offer proper shape and low front to insure clean discharge at relatively slow speed.

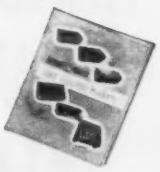


STYLE C—Recommended for handling clay, sugar, salt, wet grain, finely pulverized ores, and the like. Open front and low loading angle design prevent materials from sticking or packing in buckets.



CONTINUOUS—Designed for elevating coal, sand, gravel, crushed stone, and other dry materials. Provide high capacities at low speeds. Flanged front forms chute—assures clean, gentle discharge.

match your material and load requirements with the right LINK-BELT cast elevator bucket



Light or heavy . . . free-flowing or sticky . . . abrasive or corrosive . . . fine or lumpy—Link-Belt offers a type and size of cast elevator bucket designed to give you years of trouble-free, low-cost performance. Link-Belt buckets feature reinforced corners for added strength . . . smooth, seamless surfaces for quick, easy pickup and discharge. And they're available in malleable iron or longer-lasting Promal. For facts, see your Link-Belt office or authorized stock-carrying distributor. Ask for Booklet 2465.

LINK-BELT

CAST ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14.547

▲ For more details circle NED-469 B8 on enclosed inquiry slip ▲

Now! MARK
FLAT, ROUND, CONTOURED SURFACES at HIGH SPEEDS!

MARKS ANY SHAPE

WITH Automark
(MODEL HRMA)
ROLL MARKING MACHINE

Here is speed, versatility and adaptability in a Marking Machine that operates by air pressure and that is controlled electrically. Marks any shape material... round, flat or contoured.

CUTS PRODUCTION COSTS...
GREATLY INCREASES OUTPUT

The Automark operates at speeds up to 6,000 or more 1-inch strokes per hour, or 1,400 strokes per hour on stroke of ram and die slide combination. Think of all the saving in time and money with Automarks in your shop!

AUTOMATIC FEEDS and FIXTURES MAY BE SUPPLIED...

SEND FOR BULLETIN ▶ DEFIANCE MACHINE & TOOL CO.
1922 S. VANDEVENTER Dept. QD ST. LOUIS 10, MO.

▲ For more details circle NED-470 B8 on enclosed inquiry slip ▲

▲ For more details circle NED-471 B8 on enclosed inquiry slip ▲

LOOK WHAT YOU CAN DO WITH

HANDY & HARMAN SILVER BRAZING ALLOYS

You can join a host of metals, similar or dissimilar, permanently ...quickly...economically with EASY-FLO or SIL-FOS. These Handy & Harman brazing alloys are ideal for all types of production heating methods: torch, burner, induction, oven, salt bath and others. Successful silver brazing case histories are too numerous to count...the next could be yours.

Bulletin 20 tells the story of EASY-FLO, SIL-FOS and HANDY FLUX, along with valuable information on joint design and brazing techniques. We would like to send you a copy.

HANDY & HARMAN 82 Fulton Street New York 38, N. Y.

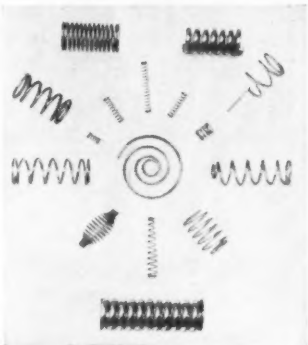
▲ For more details circle NED-472 B8 on enclosed inquiry slip ▲

LOW LIFT HAND TRUCKS
in fork type and platform models

Offered in mechanical and hydraulic lift types with capacities from 1000 to 10,000 lb, line of Automatic hand trucks includes both fork type pallet and platform models. Platform models include range of sizes, while the pallet models have 36, 42, and 48-in. long forks. Features include ease in operating lift, Timken thrust bearing in steering column, balanced handle, controlled lowering, and choice of steel, rubber-tired, or floor-saver wheels. Made by **Automatic Transportation Co.,** 149 W. 87th St., Chicago 20, Ill.

▲ For more details circle NED-473 B8 on enclosed inquiry slip ▲

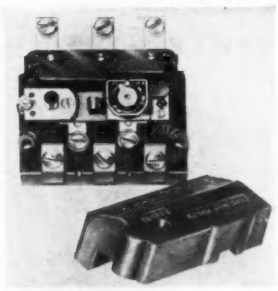
SPRINGS & STAMPINGS
made in wide variety of types



Flat, extension, compression, heavy duty, torsion, and power springs, small stampings, and clips and clamps are made to order in various metals. Company also manufactures quality-controlled springs, wire forms, and component parts of varying descriptions. Experimental and design services are offered, along with emergency fast service. Quantities from one unit up can be produced. Made by **Superb Spring Works, Inc.,** 34-B E. Sidney Ave., Mt. Vernon, N. Y.

▲ For more details circle NED-474 B8 on enclosed inquiry slip ▲

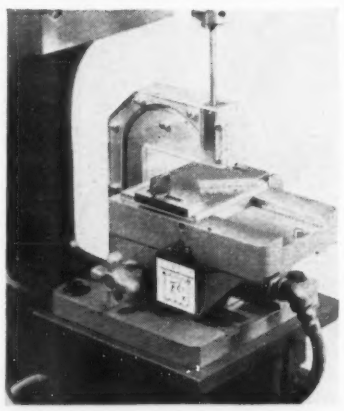
OVERLOAD RELAY
for two or three-phase protection



Full two or three-phase protection without using additional space and complete field adjustability to exact motor loads are among features of Type SD overload relay. Directly heated bimetal elements, not materially affected by normal ambient changes, assure accurate response over a range of about 25 per cent of motor current at temperatures from −24 to 55° C. Normal, quick, or slow trip thermal elements can be furnished. Single-pole double-throw switches provide the normally-closed circuit for controlling the contactor and a normally-open circuit to control an alarm or other circuit. Made by **Rowan Controller Co.,** Dept. NED, 2315 Homewood Ave., Baltimore 18, Md.

▲ For more details circle NED-475 B8 on enclosed inquiry slip ▲

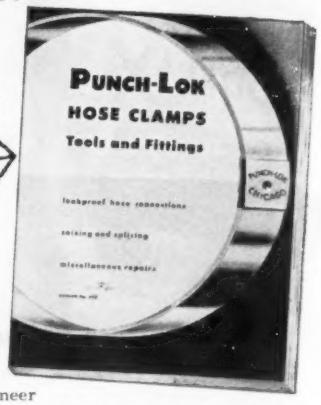
HOLE FINISHING FIXTURE
holds work for ballizing process



Sizing and finishing holes by the ballizing process is simplified with this Ball-O-Matic universal work-holding fixture. It accommodates wide range of parts for ballizing holes of 1/16 to ½-in. diameter and can be used on an arbor or drill press, vertical broach, or other equipment having a vertical ram that will hold a push rod. After ball is pressed through hole, it returns by means of air jet to top of fixture along an internal track. Interchangeable blocks are available for push rods of various diameters. V-shaped anvil holds parts up to 3 in. OD and 1⅝ in. high. Made by **Industrial Tectonics, Inc.,** Dept. NED, 3686 Jackson Rd., Ann Arbor, Mich.

▲ For more details circle NED-476 B8 on enclosed inquiry slip ▲

Write for this FREE New 12-page Data Book



It tells HOW TO SAVE Time and Money

Every maintenance engineer in industry and construction should have this complete compilation of data on the application and use of Punch-Lok Hose Clamps ... the perfect clamp for

Pneumatic Tool Hose — Suction and Discharge Hose
Welding Hose — Seizing Wire Rope Ends
Mending Split Posts, Beams, and Planks
Splicing Welding Cable — Hundreds of Other Jobs

7029

Send for this 12-PAGE Data Book TODAY!

PUNCH-LOK Company
Dept. A, 321 N. Justine St., Chicago 7, Illinois

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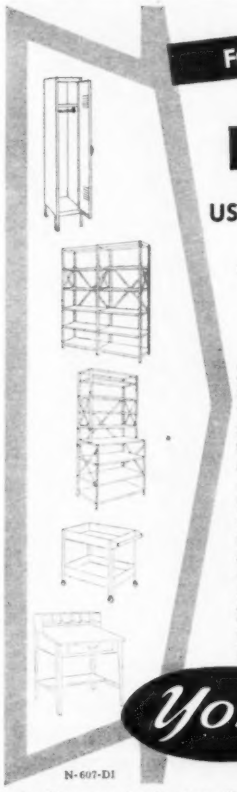

FOR ECONOMY VERSATILITY AND DURABILITY

USE York STOC-RITE

• LOCKERS • WORK TABLES
• SUPPLY CABINETS AND
• STORAGE RACKS

For economical storage facilities in plant, warehouse and office, investigate York Stoc-Rite equipment. York Multi-Purpose steel units include lockers ... stationary and mobile work tables ... racks ... shelving ... wardrobe and supply cabinets. All are shipped K. D. and can be easily assembled with screw driver and wrench. They are adjustable to suit changing requirements. Gray or green finishes are optional.

For a new high in storage efficiency and a new low in cost, send for literature and prices ... today.

York YORK SAFE & LOCK
Department C-116
Canton, Ohio

N-607-D1

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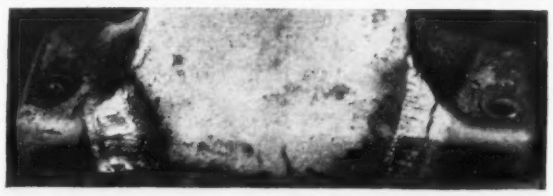

Cracked cast iron motor casing welded with Ni-Rod "55" ...$8,000 saved!

When supports of a digester drive motor cracked, production in a Canadian paper mill halted.

A new casting and lost production would cost over $8000!

How about repairing the cast iron supports? Welding Engineers Limited, of Montreal, said it could be done — with Ni-Rod* "55"* electrodes. The company used only 40 pounds of Ni-Rod "55" electrode to do the job. And the digester was back in operation the next morning. Total cost of the repair: $325.

Emergency repairs — and production welding, too — are fast and simple with Ni-Rod "55" electrode. No special equipment. No new training for weldors. Arc is stable and slag removal easy. Most jobs require no preheat.

Repair Cast Iron Parts Quickly and Easily gives illustrated examples of the many jobs you can do with Ni-Rod "55" electrode. For your copy, just write. Or circle the number below on the NED inquiry slip. *Registered trademark

INCO THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N. Y.

INCO WELDING PRODUCTS
Electrodes — Wires — Fluxes

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Lost Time?

...due to residual skin bacteria

Here's HANDWASHING with HANDISAN® ...now antiseptic with Actamer*

AT NO INCREASE IN PRICE!

Repeated daily usage reduces resident skin bacteria by as much as 97%. This mechanics' hand soap gets the heaviest grime and dirt...not just from easy-to-get-at surfaces, but from deep down in pores and calluses as well. Won't clog drains. Rinses freely. Dustless. Economical.

WRITE FOR FREE DETAILS!

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Chemical Processing Compounds
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Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Mexico City, Sydney, Paris, Montreal, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

*Monsanto's Reg. T.M.—Bithionol

▲ For more details circle **NED-480 B8** on enclosed inquiry slip ▲

Put wiring anywhere Safely with

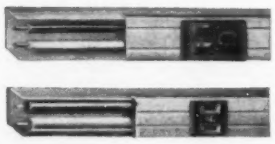
NATIONAL ELECTRIC PRODUCTS — WIRING SYSTEMS — WIRES AND CABLES

SURFACE RACEWAYS

National Electric Surface Raceways make possible safe, fast, economical on-the-surface wiring for commercial, industrial, institutional or residential installations.

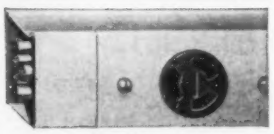
METAL MOLDING
Carries up to 10 conductors. Bends around offsets and columns. Install by simply attaching base, laying in wires and snapping in capping. No fishing necessary.

PLUG-IN STRIP
This prewired raceway is furnished with a spread of outlets every six or 18 inches and a choice of electric services . . . constant, grounded equipment or both constant service and automatic switch control.

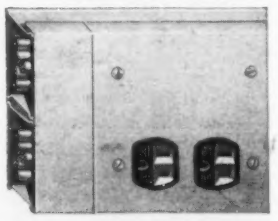


BASEDUCT
A new easy-to-mount wiring system at the baseboard level. Duplex receptacles provided every 30 or 60 inches in an easily installed wiring harness. Three inches high, baseduct extends ¾" from wall, contains raceway to handle branch circuit requirements.

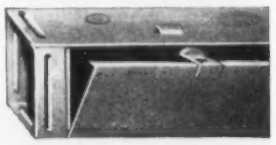
SURFACEDUCT
A two-piece, all-purpose lay-in raceway for every type of service up to 60 amperes. Device covers accommodate over 300 standard devices—simple fittings for all job requirements.



TWINDUCT
A large capacity combination high and low potential electrical raceway for commercial and light industrial applications. Consists of two rows of Surfaceduct with common cover.



WIREWAY
Hinged-lid wireway with 4" x 4" cross section provides steel protection plus accessibility. Concentric KO's. Available in 6" x 6" cross section. Easy to re-route or extend.

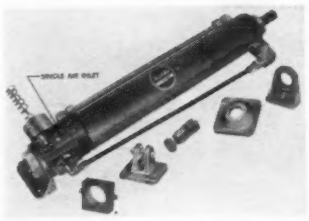


Listed by Underwriters' Laboratories Inc.

National Electric Products
PITTSBURGH, PA.
2 Plants • 12 Warehouses • 41 Sales Offices

▲ For more details circle **NED-481 B8** on enclosed inquiry slip ▲

AIR CYLINDERS
four automatic return types



AllenAir line of air cylinders is augmented by four automatic-return types for single control by electric switch or bleeder valve and with rods either normally retracted or extended. Return-controlling units are an integral part of the cylinder heads. Electric Models VER are available for 8, 110, or 220-v operation. All models are offered in 1½, 2, 2½, 3, and 4-in. bores. Automatic reciprocating air cylinders, also available, require but one air connection to the cylinder-valve unit and are controlled by a standard shut-off valve. Choice of mounts and rod clevises is available, as are cushions for both ends. Made by **A. K. Allen Co.**, 255 E. Second St., Mineola, N. Y.

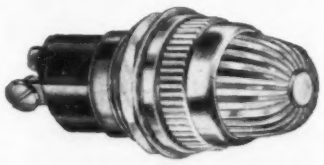
▲ For more details circle **NED-482 B8** on enclosed inquiry slip ▲

LOW-VOLTAGE TROUBLE LIGHT
safe around wet metal structures

Absolutely safe to use around dripping wet metal structures, this lighting set provides 200 to 400 w of grounded illumination in choice of 6, 12, or 32 v, from 110/120 v ac power sources. Set consists of circuit breaker-protected step-down transformer housed in moisture-tight aluminum case with up to four handlamp extensions that plug into either end of carrying case. The 6-ft extension has male end plug that connects to three-contact grounded female receptacles. Handlamps accommodate screw-in, 50 and 75-w medium Edison base bulbs for 8 and 12-v sets and 50 and 100-w bulbs for 32-v sets. Made by **Joy Mfg. Co.**, Electrical Products Div., Dept. V-95, 1201 Macklind Ave., St. Louis 10, Mo.

▲ For more details circle **NED-483 B8** on enclosed inquiry slip ▲

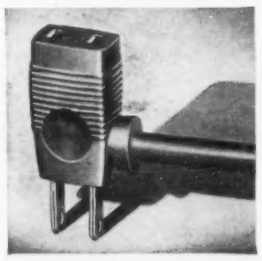
INDICATOR LIGHTS
small neon units are oiltight



Indicator lights for heavy duty industrial applications have one-piece brass bushings and lens caps which, with oilproof gaskets, render them oil, water, and dusttight. Units have high-impact phenolic insulation and will withstand severe vibration. A built-in resistor makes possible use of NE-51 neon glow lamps on voltages up to 250 v. Similar units without resistors use low voltage incandescent lamps with a miniature bayonet base. Stovepipe lens shown is fluted type for omnidirectional visibility. Lens may also be specified as plain, unfrosted, or with frosted back, in a choice of seven colors. Screw and solder type terminals are offered. Made by **Dialight Corp.**, 64 Stewart Ave., Brooklyn 37, N. Y.

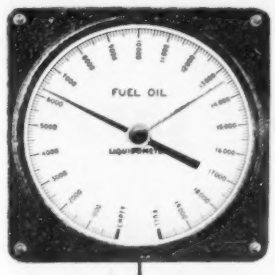
▲ For more details circle **NED-484 B8** on enclosed inquiry slip ▲

POWER PLUG
has built-in switch connection



Lighting, appliances, or electronic instruments can be remotely switched or controlled by this power plug with a built-in switch connection. It is plugged into any power outlet and the appliance to be controlled is plugged into the end of the series attachment cap. Used with two-conductor wires, any simple switching device controls the power to this outlet. For control devices requiring power, three-conductor wires are used. The series plug is molded of matching plastic onto vinyl insulated wire of any color, in many types and sizes. Plug is furnished on cordsets to manufacturers by **Miller Electric Co.**, Dept. N, 120 Main St., Pawtucket, R. I.

▲ For more details circle **NED-485 B8** on enclosed inquiry slip ▲

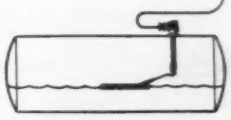


100% AUTOMATIC TANK GAUGING

Dependable remote reading tank contents gauges using a closed hydraulic transmission system. No power required.

Several sizes available. Approved by Underwriters Laboratories and Factory Mutual. UL approved switches.

Write for complete details, to Dept. H

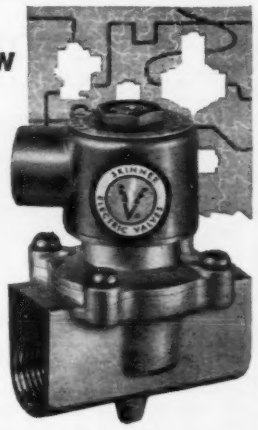


Since 1920 ...of proven quality

THE LIQUIDOMETER CORP.
LONG ISLAND CITY 1, NEW YORK

▲ For more details circle **NED-486 B8** on enclosed inquiry slip ▲

New Skinner High-Flow Valves at Low Prices



Here it is—one of the many new lines Skinner will bring you in 1958. A new 2-way, normally closed, pilot-operated valve that is lighter in weight—only 1¾ pounds—and only 3 31/32" high (2¾" between ports)... yet it permits full flow through a ½" orifice with either ⅜" or ½" pipe taps.

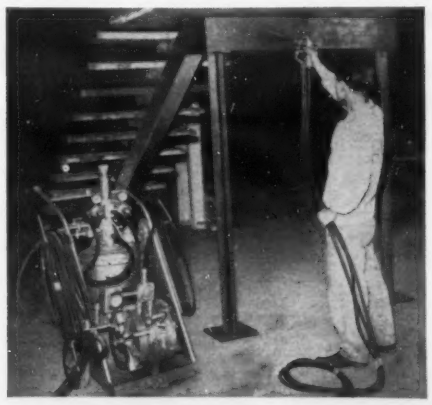
The valve handles pressures from 5 psi to 150 psi, with temperature ranges from −40°F to 180°F, and will operate on all popular AC and DC voltages. It is also available for normally open operation, with such options as manual override, explosionproof construction and choice of electrical connections.

The Series L valve mounts directly to a line . . . operates in any position . . . consumes only 8 watts. The soft, synthetic inserts assure bubbletight operation. The unique diaphragm is designed to outlast and outperform all others.

You can get full details by contacting the Skinner Representative or Distributor near you. He's listed in the Yellow Pages or write to Skinner, Dept. 432.

SKINNER ELECTRIC VALVE DIVISION
NEW BRITAIN CONNECTICUT
105 EDGEWOOD AVENUE
THE CREST OF QUALITY

▲ For more details circle **NED-487 B8** on enclosed inquiry slip ▲



STEEL FABRICATOR INCREASES PRODUCTION WITH SPEE-FLO PACKAGE UNIT

PROBLEM: To finish an additional 15 tons of fabricated steel daily with no increase in facilities or personnel.
SOLUTION: Installation of Spee-Flo "Little Chief" Portable Hot Spray Unit.

The Offenhauser Company, Houston, fully expected to add to its spraying area and paint crew in order to finish ⅓ more products daily. However, with Spee-Flo Portable Paint Heaters, they handled the increased production *without adding to their overhead.* Overspray is greatly reduced, and they enjoy big savings in solvent and coating materials.

The same advantages and benefits result with any type of finish when it is hot sprayed. See what it can do for *you.*

Details on request.

For our booklet, "Why Hot Spray," write Spee-Flo Company, Dept. NE 107, 720 Polk, Houston 2, Texas.

▲ For more details circle **NED-488 B8** on enclosed inquiry slip ▲

PROVED...

IN YEARS OF SERVICE

KEY Graphite Paste

has been on the market more than 35 years, has been proved the superior compound in millions of joint, thread and gasket applications for oil, gas and high pressure steam services.

KEY Paste is used in large volume in virtually every oil refinery; is endorsed by leading oil and gasoline equipment manufacturers.

Order KEY Graphite Paste from your Supply House.

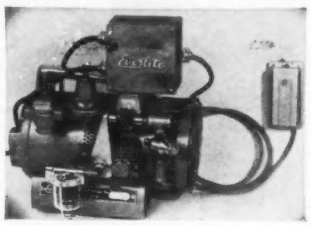
SEND FOR YOUR FREE SAMPLE
Write Dept. Z-2 for trial can of KEY Graphite Paste

W-K-M
DIVISION OF ACF INDUSTRIES INCORPORATED
PLANT: MISSOURI CITY, TEXAS
MAILING ADDRESS: P. O. BOX 2117, HOUSTON, TEXAS

KP 5701

For more details circle NED-490 B8 on enclosed inquiry slip

AUTOMATIC HUMIDIFIER
maintains humidistat dial setting

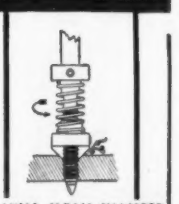


Constant humidity is automatically maintained in industrial buildings and warehouses by setting the humidistat dial on the Everlite humidifier. The stationary or portable unit plugs into a 110-v ac outlet and attaches to a water line by hose or pipe. It combines air and water under pressure to provide dripless atomization of water. The adjustable-volume nozzle has a capacity up to 2½ gph. For large or separate areas, additional nozzles may be added and operated simultaneously. Standard E-5000 unit consists of air compressor, solenoid valve, humidistat, and air-water nozzle. Price is $152. Made by **Aluminum Greenhouses, Inc.**, Dept. N, 14615 Lorain Ave., Cleveland 11, Ohio.

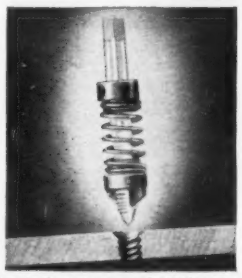
For more details circle NED-493 B8 on enclosed inquiry slip

TAP AND DEBURR IN ONE OPERATION

Slip a BURR-BIT onto any make tap and holes are automatically deburred while they are being tapped. Save money, time and labor by COMBINING TWO OPERATIONS INTO ONE.



AS TAP IS WITHDRAWN, BURR-BIT DEBURRS, LEAVING CLEAN CHAMFER



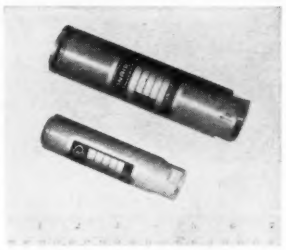
First thread which creates burr, has been AUTOMATICALLY, QUICKLY AND PRECISELY REMOVED, leaving perfectly smooth finish for easy screw insertion.

Precisely engineered of finest quality high speed tool steel for use on almost every material. The BURR-BIT is used by many large and small manufacturers throughout the country.

For full information and specifications on the BURR-BIT, write to
VERNON DEVICES, Inc.
481 E. 3rd Street Mt. Vernon, N.Y. MOunt Vernon 4-1686

For more details circle NED-497 B8 on enclosed inquiry slip

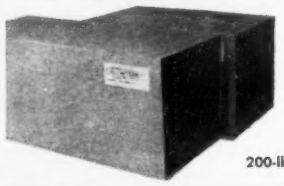
FLOW & RATE LIMITERS
control flows at up to 5000 psi



These flow and rate limiters can control fluid flows at any pressure up to 5000 psi with accuracy approaching ±1 per cent. Applications include auto-pilot, manual, hydraulic speed, and hydraulic linear actuator controls; fuel metering; and hydraulic test board master. They can be used with fluids at temperatures from −65 to 400° F. Plunger and spring are only moving parts. Present line includes sizes from 0.5 to 11 gpm, although smaller and larger sizes can be produced to specification. Made by **Conair, Inc.**, Dept. 19, 731 W. Wilson Ave., Glendale 3, Calif.

For more details circle NED-494 B8 on enclosed inquiry slip

AN ORDERLY SYSTEM
FOR FILING · STORING · SEGREGATING



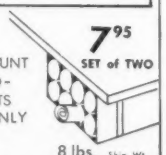
TRACINGS BLUE PRINTS SHEET MATERIAL

FILE CONSTRUCTED IN 200-lbs-Test CORRUGATED CONTAINER

25 TUBE Model 2½" I.D.			2530	2536	2542
49 TUBE Model 1¾" I. D.	49AB	49CD	4930	4936	4942
DEPTH	11¼"	22¼"	30½"	36½"	42¼"
PRICE	$6.25	$8.35	$10.85	$11.95	$12.85
	SHIPPING WEIGHT				
MOD. 25	——	——	13 lbs.	15 lbs.	17 lbs.
MOD. 49	8 lbs.	12 lbs.	15 lbs.	18 lbs.	20 lbs.

JR 36
DESIGNED TO MOUNT UNDER BOARD-MOUNTING BRACKETS FURNISHED. GRAY ONLY

7.95 SET of TWO



8 lbs. Ship Wt.

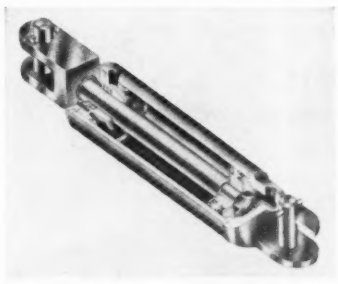
SOLD IN SETS ONLY — 2 JR36 PER SET

ENAMELED DARK GREEN OR MED. GRAY — State Color

F.O.B. FRASER, MICHIGAN · PRESCOTT 3-2515 · SOLD DIRECT ONLY
ROLL & FILE SYSTEMS, INC. · P.O. BOX 3863, DETROIT 5, MICH.

For more details circle NED-491 B8 on enclosed inquiry slip

HYDRAULIC CYLINDERS
in 3 to 7-in. stock diameters



Adjustment - free, long-wearing, pressure-sealing, Johns-Manville piston and rod packing is a feature of Be-Ge line of heavy duty, industrial, hydraulic cylinders. They have hard-chromed, ground, piston rods; welded-on cylinder heads at the tube end; and a homogeneous wiper on the rod end of each cylinder to keep out foreign matter. Stocked are 3 to 7-in. diameters with strokes from 16 to 36 in. in 2-in. increments. Standard pressures are up to 2500 psi on all but the 7-in. diameter, which is limited to 1500 psi. Specials with 2½ to 7-in. diameters for various pressures are available. Made by **Be-Ge Mfg. Co.**, Dept. NED, Gilroy, Calif.

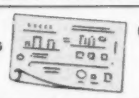
For more details circle NED-495 B8 on enclosed inquiry slip

Move the Contents Not the Drum!

Now you can stop costly, dangerous handling of heavy drums! Graco "direct-from-drum" Pumps are designed to pump fluids from your receiving entrance direct to point of use. Many plants are making tremendous savings by reducing drum handling to absolute minimum. "Move the contents, *not* the drum!"

GRACO *air-operated*
"DIRECT-FROM-DRUM" PUMPS

WRITE FOR SAMPLE DRAWING OF TYPICAL SET-UP.



GRAY COMPANY, INC.
27 Graco Square
Minneapolis 13, Minnesota

FACTORY BRANCHES: New York (Long Island City) • Philadelphia
Detroit • Chicago • Atlanta • Houston • San Francisco
See your Graco Distributor

For more details circle NED-498 B8 on enclosed inquiry slip

NOW! *Adjustable Diameter and Open*
THOMSON **BALL BUSHINGS**

Precision Series "A" and Low Cost Series "B" BALL BUSHING

Adjustable Diameter BALL BUSHING for Zero Clearance

Open BALL BUSHING for Zero Clearance on Supported Shafts

The BALL Bearing for *all* your **LINEAR MOTIONS**

LOW FRICTION · ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE · LASTING ALIGNMENT

The various types cover a shaft diameter range of ¼" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.

THOMSON INDUSTRIES, Inc.
Dept. C. MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings
... Sleeve Bearings of DuPont NYLON

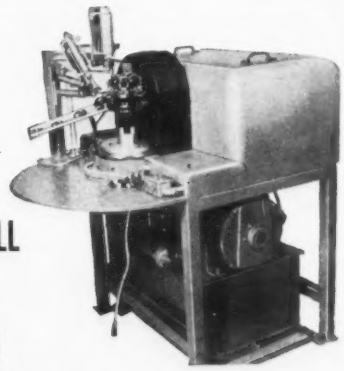
For more details circle NED-492 B8 on enclosed inquiry slip

BALANCING MACHINES
horizontal static-dynamic type

Both the angle and amount of unbalance of parts are determined quickly by adjusting simple electrical controls on Rava electrodynamic balancing machines. Intended for production and short-run balancing, they rotate the workpiece at up to 3600 rpm. An auxiliary frequency converter makes speeds up to 36,000 rpm available. Movement of adjustable work support pedestals positions seismic-mounted vibration pickups. Workpiece is supported by two elastically-mounted bearing surfaces for free vertical and horizontal rotor movement. Mechanical vibrations are transformed into electrical voltages. Machines are built in a wide range of sizes for parts weighing from a few ounces to a ton or more. Made by **Tinius Olsen Testing Machine Co.**, 7547 Easton Rd., Willow Grove, Pa.

For more details circle NED-496 B8 on enclosed inquiry slip

GENESEE HYDRAULIC FIELD COIL WINDER FOR ALL RECTANGULAR FIELD COILS IN ELECTRIC MOTORS



1. Automatic turn counter, easily adjustable.
2. Level winding with fluid power.
3. Tandem winding and automatic cut-off for multiple or single coils with automatic ejection.
4. Instantly adjustable speed and torque control of winder. Maximum speed: 3600 rpm.
5. Positive positioning of flyer, with one turn accuracy, requiring no clutches or brakes.
6. Open-type jaws for ease of taping on the machine, to prevent loosely taped coils.
7. Automatic tape dispenser available.
8. Nylon wire guides and pulleys to protect insulation and eliminate wire twist.

Send sample coils for recommendation of model required

GENESEE MACHINE BUILDERS, INC.
1732 HUDSON AVENUE, ROCHESTER 17, NEW YORK

For more details circle NED-499 B8 on enclosed inquiry slip

Easily Cuts
10-Gauge Stainless
8-Gauge Mild Steel
3/16" Aluminum and
All Non-Ferrous Metals
Without Distortion

FENWAY NIBBLERS

Will Not Bend or Curl Metal
Lightweight Fully Portable

Models Available to Do Every Cutting Job

Cuts Any Shape, Including Corrugated Metal Without Distortion
PAT. #2278174 #7278311 #2535631

Get a Free
On The Job Demonstration

3107 N. Broad St.
Philadelphia 32, Pa.

FENWAY
Machine Company, Inc.

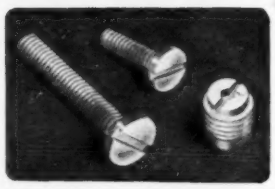
▲ For more details circle NED-500 B8 on enclosed inquiry slip ▲

NEW NYLON PARTS
from GRC

Economically mass produced on fully automatic, patented machines, these stock GRC nylon parts are available in many sizes and types. GRC uses single cavity techniques, molds in one automatic cycle, gets accurate, uniform parts, ready for immediate use.

These advantages, these economies, apply too on parts made to exact specifications . . . in quantities of 50,000 to many millions. Write for bulletin describing GRC's unique methods for injection molding small plastic parts or send prints for quotation. Ask about our zinc alloy die castings, too!

Maximum size: 1¼" long, .03 oz. No size too small.



GRC NYLON SCREWS
molded to close tolerances

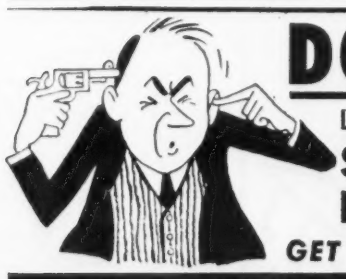
Economical . . . clean, sharp Class 2 threads . . . high strength to weight ratio . . . built-in electrical insulating properties . . . stable over a wide range of temperatures . . . resilient and elastic, conform to irregular shapes, seal, don't loosen under vibration . . . non-magnetic . . . non-corrosive . . . chemical resistant . . . in colors to order . . .

These unique GRC nylon screws permit radical product changes . . . improved design. Write, wire, phone TODAY for specification sheets and prices. Available from stock.

GRIES

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y., NEw Rochelle 3-8600

▲ For more details circle NED-501 B8 on enclosed inquiry slip ▲



DON'T
LET YOUR
STRIPPING
PROBLEMS
GET YOU DOWN!

EPOXYSTRIP
Is a LIFE SAVER—TIME SAVER—MONEY SAVER

A new more powerful paint stripper that outstrips all others! No organic finishes have yet resisted this amazing paint stripper. It was especially formulated to remove epoxies . . . with the same ease that it removes baked enamels, lacquers, etc. No stripping scum—clean rinsing!

- EPOXYSTRIP WILL NOT HARM SOFT METALS
- ECONOMICAL—MORE JOBS PER GALLON AT LOWER COST
- NO SCRUBBING OR MANUAL ASSISTANCE
- RECOMMENDED BY LEADING FINISH MANUFACTURERS

SEND FOR FREE BROCHURE

JOBBERS: Beck EPOXYSTRIP sells on demonstration. Try it and see for yourself.

BECK EQUIPMENT COMPANY
3352 WEST 137th STREET CLEVELAND 11, OHIO

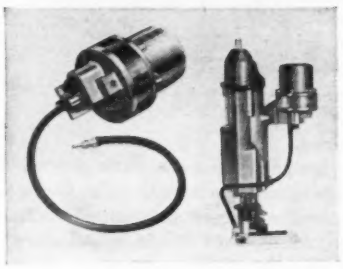
▲ For more details circle NED-502 B8 on enclosed inquiry slip ▲

INSPECTION LIGHTS
illuminate even small cavities

Clear, sharp beam of light that is free from filament shadows and other aberrations is produced by hand-made, miniature lamps used in group of industrial inspection lights. Very small shaft and lamp diameters permit their use in small cavities. Lights are available in spot or diffused beam, with short or long extension shafts, and with or without rotatable mirrors, magnifying lenses, and directional caps. Individual lights are quickly interchanged on a single handle which also serves as the power source containing dry cells or a transformer connected to a 110-v outlet. Handle also has a rheostat for varying light intensity. Made by **Welch Allyn, Inc.**, Dept. NED, Skaneateles Falls, N. Y.

▲ For more details circle NED-503 B8 on enclosed inquiry slip ▲

COOLING MIST SPRAYER
unit cools small power tools



Pressurized fluid reservoir of the Mistmatic portable air mist sprayer assures instant delivery of coolant to the spray nozzle for mist-cooling of hand drill motors and other small power tools. It is easily installed on these and other tools, grinders, routers, and saws. For normal applications, the air supply is furnished from the tool on which it is mounted. The spray acts as a coolant and lubricant when cutting or drilling steel or laminated panels. Reservoir capacity is 4 cu in. Made by **Winslow Product Engineering Corp.**, Dept. N, 47 St. Joseph St., Arcadia, Calif.

▲ For more details circle NED-504 B8 on enclosed inquiry slip ▲

TORQUE LIMITER
used on power screwdrivers

Accurate torquing of screws and bolts in the 2 to 25 lb-in. range is possible with the Livermont Junior torque limiter, adaptable to most power screwdrivers. The snap-lock bit holder can use any standard ¼-in. hex bit. Unit is designed for electrical and electronic assemblies where small and fragile fasteners are used, and where threads might be stripped or otherwise damaged. Tool is set to the desired torque by a simple adjustment. Its weight is 6 oz and its length is 4½ in. Made by **Livermont Inc.**, Dept. NED-58, Maple & Myrtle, Monrovia, Calif.

▲ For more details circle NED-505 B8 on enclosed inquiry slip ▲

PIPE JACKET
for heating or cooling pipe

Bolted directly on existing pipelines without interfering with plant operation, Gross pipe jacket is available from stock for 2-in. standard and 1½-in. Kar-

bate pipe in 9-ft 7-in. lengths. Other sizes and lengths can be supplied on order. Stuffing box at each end seals off the jacket section. As shown in illustration, a solid rubber cord is wound to the selected pitch around the pipe. This creates a spiral path for the heating or cooling medium and assures maximum heat transfer. Jacket can be removed and reused elsewhere, if desired. Made by **F. R. Gross Co.**, Box 2044, Akron 11, Ohio.

▲ For more details circle NED-506 B8 on enclosed inquiry slip ▲

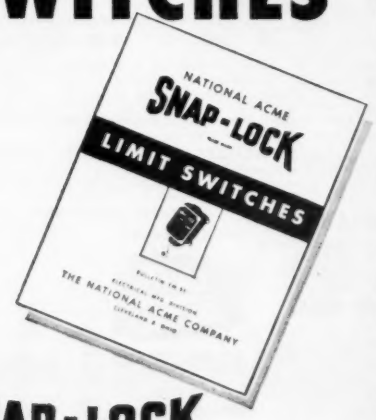
YOUR BEST MOVE IS TO MOVE WITH
MERRILL
MATERIAL HANDLING DEVICES

For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.
3-R-5

▲ For more details circle NED-507 B8 on enclosed inquiry slip ▲

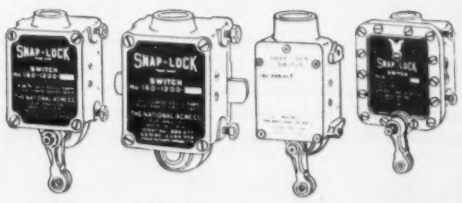
Free Information
about LIMIT
SWITCHES



SNAP-LOCK limit switches were originally designed to serve the mechanical and electrical requirements of machine tools. However, since their introduction, they have proved valuable in other fields where a heavy-duty limit switch of high reliability and extra ruggedness is required. Snap-Lock switches can be used for single, double or distribution circuit wiring. Will handle 5 amps, 550 volts, AC. There are six basic models, plus a wide variety of actuating levers—a stock model is probably available to fit your exact needs.

Our Bulletin EM-51 contains a wealth of information about Limit Switches. Write for your free copy today.

Electrical Manufacturing Division
National Acme
The National Acme Company, 182 E. 131 St., Cleveland 8, Ohio



Standard Model | Push Lever Model | Water Resistant Model | Explosion Resistant Model

▲ For more details circle NED-508 B8 on enclosed inquiry slip ▲

Special U-Type Safety GRATING

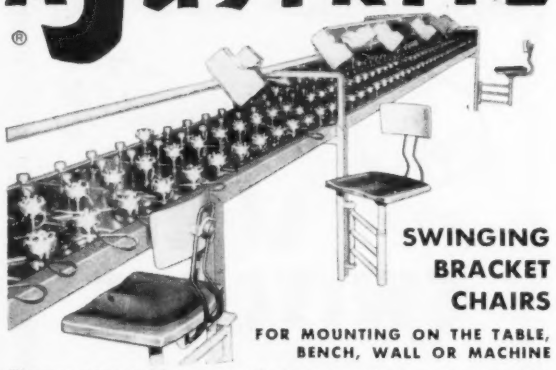
Now Available—Dravo safety U-type grating is designed particularly for use in critical areas where minimum openings are required. Openings of only 5/16" x 1 7/8". Bearing bars are 11/16" apart, with cross bars on 2" centers.

For information, write Dravo Corporation, Dept. D-2402, Pittsburgh 22, Pa.

DRAVO CORPORATION

▲ For more details circle **NED-509 B8** on enclosed inquiry slip ▲

AJUSTRITE®



SWINGING BRACKET CHAIRS

FOR MOUNTING ON THE TABLE, BENCH, WALL OR MACHINE

The seat raises and lowers a total of 8 inches. The bracket swings 15½ inches from attaching plate. Contains all the adjusting features of regular AJUSTRITE chairs. Made of 16 ga. steel tube—electrically welded and equipped with powdered iron bearings—lifetime lubricated. Tested with 600 lb. load. Special mounting brackets to serve many individual needs, will be developed on application.

ADVANTAGES OF SWINGING BRACKETS

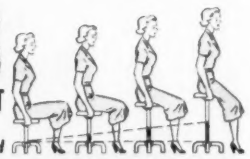
(a) Allows each worker to swing in as close to his operation as he may care to. (b) Keeps chairs off of floors. (c) Stops interchange of chairs from one department to another.

GUARANTEED against failure due to defective material or workmanship for 10 years.

FREE TRIAL Try for 30 days (no obligation) the many advantages of AJUSTRITE Swinging Bracket Chairs. Ask for catalog.

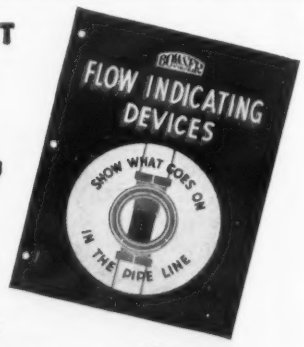
AJUSTO EQUIPMENT COMPANY
515 Conneaut St. Bowling Green, Ohio

SPLIT SECOND **ADJUSTMENT** . . . to any Height Desired



▲ For more details circle **NED-510 B8** on enclosed inquiry slip ▲

THIS BOOKLET "FLOW INDICATING DEVICES" IS YOURS



. . . CONTAINS DATA ON WIDE SELECTION OF FLOW DEVICES SUCH AS:

Fig. 54A Flow Sight — Fig. 816 Teleflo Indicator — Fig. 811 Flow Indicator

Plant and product engineers have relied on Bowser, liquid handling specialists since 1885, for prompt service. For sight glasses in single or double-window types, gravity or pressure models; or for electric or mechanical indicators . . . there is a Bowser man nearby ready to help you . . . quick!

PRODUCT OF BOWSER RESEARCH

WRITE FOR FLOW DEVICES BOOKLET } *Contains Complete Specifications*

BOWSER, INC., 1381 E. CREIGHTON, FT. WAYNE, IND.

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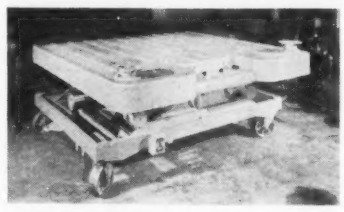
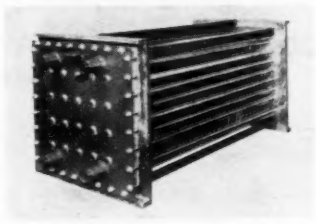
DIE HANDLING TABLE has hydraulic powered winch



Two hydraulic motors, powered by a single motor driven pump, actuate the elevating mechanism as well as the reversing winch of this die handling table. It is also suited for other material handling operations. The 72 x 90-in. deck can be raised or lowered from 26 to 48 in. above the floor and locked at any height. Equipped with four wheels, this mobile elevating table has a capacity of 30,000 lb. Knobs control the lifting power as well as the speed and direction of the two 5000-lb pull capacity winches. Welded flat strips on table assure stability of load when table is pulled or pushed with a tractor. Made by **Lange Lift Co.,** 4276 N. 124th St., Milwaukee 10, Wis.

▲ For more details circle **NED-512 B8** on enclosed inquiry slip ▲

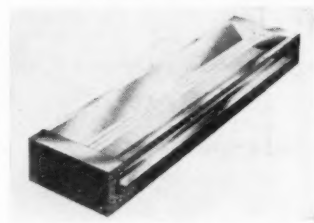
HEAT EXCHANGER COILS offered in various metals and types



Aluminum, copper, stainless steel, carbon and alloy steels, and hot-dipped galvanized steel are among metals from which heat exchanger coils can be made. Both prime surface and extended surface types are offered. They are made to specifications in various styles such as series flow, serpentine, parallel flow with special headers, fully cleanable, variously partitioned, and bent to various radii. Service pressures range to 3000 psi. Made by **Niagara Blower Co.,** Dept. E. D., 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-513 B8** on enclosed inquiry slip ▲

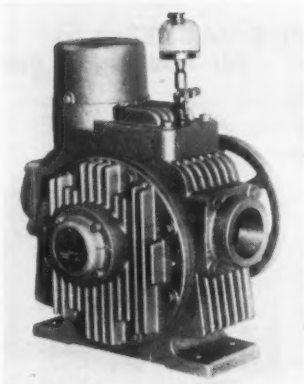
INFRARED OVEN SECTIONS use any of three heat sources



This series of infrared oven sections can be furnished with choice of metal rod, quartz lamp, or quartz tube heat sources for industrial drying and finishing operations. Either specular gold or aluminized steel reflectors are optional, and they distribute an even pattern of heat. Widths of 5½ in. for one or two heat sources and 11 in. for one to three heat sources are available in various lengths. Heat sources are readily changed from one type to another in newly designed sockets. Features include bolt-type construction for quick change in oven setup, controls for selection of desired finishing temperature, and open-end design for addition of sections to length. Made by **Fostoria Pressed Steel Corp.,** 1240 Harris Rd., Fostoria, Ohio.

▲ For more details circle **NED-514 B8** on enclosed inquiry slip ▲

ROTARY VANE COMPRESSORS 1 to 3 psi model rated 400-6000 cfh



Built-in automatic bypass regulator maintains preset delivery pressure at varying outputs in line of air-cooled rotary vane compressors. Output can be varied from 100 per cent to any increment. Complete shut-off for short periods causes no excessive heating. Line includes sizes from 400 to 6000 cfh at pressures from 1 to 3 psi. Units are gas-tight for handling gas-air mixtures. Rotor holds six plastic composition vanes which slide in and out of the rotor slots. These are the only moving parts. Bearings are permanently silicone-lubricated. Any standard V-belt drive with final speed of 750 to 1100 rpm, can drive the compressors. Made by **Waukee Engineering Co.,** 5138 N. 35th St., Milwaukee 9, Wis.

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AUTOMATIC FLOW with Work-O-Matic* box and stand

TEAMING the Work-O-Matic drop-bottom box with Union Metal's specially designed positioning stand means uninterrupted feeding of parts-in-process at proper working level. Result—operator and machine receive a continuing supply of materials . . . no waiting . . . no lost production . . . no stoop, stretch or bend.

In addition, Union Metal offers industry's broadest line of conventional type material handling containers. Write for complete catalog information. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

▲ For more details circle **NED-516 B8** on

"WE CUT ELECTRICAL INSTALLATI AND GOT BETTER PROTECTION—*by throughout our New Dairy Plant.*"

William J. Oyala Electrical Supervisor
Fred Meyer Co., Portland, Oregon

Mr. Oyala continues . . . "In our new dairy plant in Portland, Fusetron fuses saved us about $800 by enabling us to use the proper switch sizes for the motor disconnects. This was possible because the long time-lag of Fusetron fuses permitted us to install them in smaller sizes that would have been possible with ordinary fuses.

"In addition, we were able to reduce the space required by the control centers.

"The Fusetron fuses were installed in sizes small enough to give us motor-running protection as well as motor branch circuit protection.

"The result of this has been the prevention of motor burnouts. Not once in the past year of operation has a Fusetron fuse failed to protect a motor. We have 138 motors, ranging from 1/40 HP to 100 HP, and all are protected by Fusetron fuses.

"Both Mr. Eric Christenson, whose company contracted the electrical work, and myself believe that by installing Fusetron fuses throughout our entire plant we got top protection at a cost lower than could have been obtained by any other method."

FUSETRON dual-element FUSES PROVIDE SAFER, MORE DEPENDABLE PROTECTION

Only Fusetron fuses provide 10 point protection — not possible with any other type of protective device.

No Maintenance or Recalibration Costs. Once properly installed, Fusetron fuses require no inspection or down-time for calibration and other maintenance necessary on mechanically operated devices.

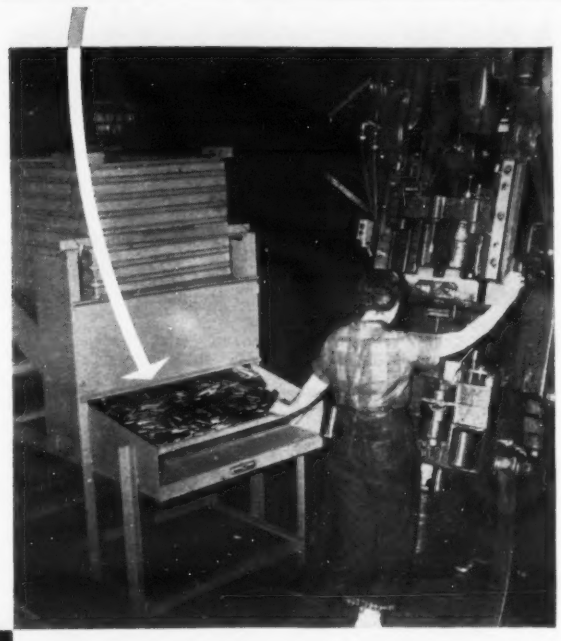
For more information . . . write for bulletin FIS.

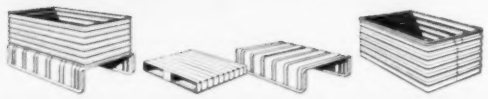
Bussmann Mfg. Division
McGraw-Edison Co., St. Louis 7, Mo.

Pla
element fu

▲ For more details circle **NED-517 B8** on

▲ For more details circle **NED-518 B8** on





*Patent No. 2,445,038

ED-516 B8 on enclosed inquiry slip ▲

ALLATION COSTS
ON—*by installing Fusetron Fuses*

ED-517 B8 on enclosed inquiry slip ▲

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SKF *bearings*
round the corner

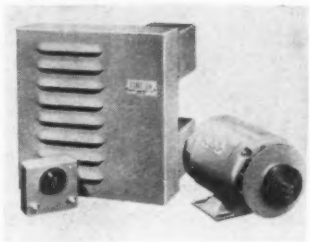
They're at your SKF bearing distributor—ready for prompt delivery. You'll find all types and sizes—plus the kind of technical assistance that keeps them rolling smoothly for you. 7809

SKF®
EVERY TYPE—EVERY USE

Spherical, Cylindrical, Ball, and "Timken" Tapered Roller Bearings
"Reg. U. S. Pat. Off.
SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

NED-518 B8 on enclosed inquiry slip ▲

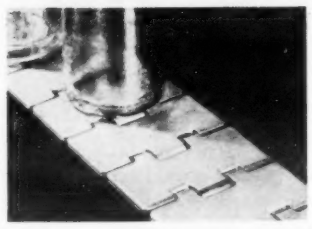
MOTOR SPEED CONTROL
furnished in 1/6 to ½-hp ratings



Comparable in efficiency to variable speed drives with direct current motors, this Fincor motor control package uses 220-v three-phase 60-cycle current without rectification. Drive is available in 1/6, ¼, 1/3, and ½-hp sizes in speed ranges to suit user's need. Package includes motor, frame, built-in tachometer, and magnetic-amplifier speed controller. Desired speed is reached quickly without hunting. Features include direct current plugging for time-controlled braking, controlled acceleration, pushbutton for start-stop, overload protection, and antihunt provision to hold speed stable at the specified setting. Made by **Fidelity Instrument Corp.**, 1002 E. Boundary Ave., York, Pa.

▲ For more details circle **NED-519 B8** on enclosed inquiry slip ▲

FLAT CONVEYOR CHAIN
offered in five widths



Mild carbon case hardened and mild carbon Electrolized steel Flatveyor chain is offered with a wide bearing design which minimizes wear. Latter type has a higher tensile strength, load capacity, and maximum speed than stainless steel. Offered with companion sprockets, chain is made in 3¼, 4, 4½, 6, and 7½-in. widths with eight links per foot. Standard sprocket has a ⅝-in. bore and a hex head set screw, but it may be rebored up to 1½ in. and furnished with a keyseat. Maximum working load is 750 lb, and standard stocked length is 10 ft. Made by **Browning Mfg. Co.**, 1940 Browning Dr., Maysville, Ky.

▲ For more details circle **NED-520 B8** on enclosed inquiry slip ▲

LEAD & FEED SCREWS
in any length up to 20 ft

Precision lead and feed screws with hardened and ground milled threads are now available in any size or length up to 20 ft. Super precision of these lead and feed screws is obtained from manufacture on company-designed and built production equipment. Gears and splines of all types, aircraft and automotive parts, machine parts and assemblies, and fixtures are among the precision parts also made by **Enterprise Tool & Gear Corp.**, 8322 E. McNichols Rd., Detroit 34, Mich.

▲ For more details circle **NED-521 B8** on enclosed inquiry slip ▲

PUNCH PRESS
bench type has 7-in. shut height

Model BHS-2 power bench type punch press has a 2-ton capacity and a 7-in. high shut height, the latter equivalent to presses with greater capacities. Main grey iron frame has uprights and reinforcing ribs for rigidity and strength. Crankshafts of turned, ground, and polished high-manganese carbon steel are resistant to shock and load. The quick-action, single-pin clutch is of nonrepeat or repeat action design. Standard stroke is ¾ in., with ¼ to 1½-in. strokes optional at extra cost. Flywheel for V-belt drive has a recommended speed of 300 rpm and requires a ⅓ hp motor. Price of $169.50 includes motor mount and V-belt and motor pulley. Made by **Alva Allen Industries**, Dept. NED, 1001-1015 N. Third St., Clinton, Mo.

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RMC Dial Thermometers will serve you best!

HERE'S WHY:

1. Only RMC does a genuine hermetic sealing job to prevent bimetal freeze-up and dial fogging.
2. Only RMC offers an external dial-reset device to permit on-the-job recalibration when necessary.
3. The bi-metallic helix is silicone dampened to withstand shock and vibration; with special dampening bearings.
4. #304 Stainless Steel and heliarc welding provide superior resistance to corrosion.
5. RMC can give you the right thermometer for the job. Many different types are available, with dial sizes ranging from 1" to 5" Scale ranges from −150°F to +1000°F.

RMC REPRESENTATIVES IN ALL PRINCIPAL CITIES

ROCHESTER MANUFACTURING CO.
114 ROCKWOOD STREET — ROCHESTER 10, N.Y.

▲ For more details circle **NED-523 B8** on enclosed inquiry slip ▲

sure/bore

"Package Plan"

offers...
★ CONVENIENCE ★ EFFICIENCY ★ ECONOMY

NEW PACKAGE PLAN INCLUDES:

Boring Bar "4—some Package"...
4 Boring Bars from 7/8" to 1-3/4" dia., with Micrometer adjustment. Tool Bit mounted at 53° or 90° angle. Boring range from 1" to 3-1/8" dia.

Sure-Bore Cartridge "Package"...
"53" or "90" pack includes 3 complete assemblies, cartridges, carbide tool bits, wrenches.

Boring Head "2—some Package"...
includes a 2" and 3" head, 2 long and 2 short tool bits. Boring range 2-3/4" to 5-1/4" dia.

WRITE FOR LITERATURE AND PRICES

PORTAGE Double-Quick, Inc.
1043 SWEITZER AVENUE • AKRON 11, OHIO

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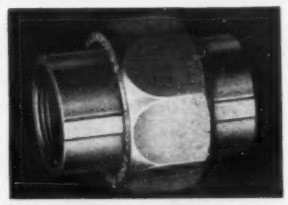
Rockwood Cold Forged
STEEL UNIONS



NOW, Color-Coded for Positive Identification

Now Rockwood makes identification easy for pipe fitters and warehouse personnel.

Rockwood Unions offer you 4 different seats — for all general piping requirements — approved by Underwriters' Laboratories, Inc. for use in handling flammable liquids. Only Rockwood Unions are 100% inhibited against corrosion. Threads are "Rockwoodized" and seats are made of non-corrosive material and are sold off standard Black Steel price list. All parts are completely interchangeable. Write for full information and take your choice.

Nut-Gray — Type 601 . . . Silicon Bronze Seats . . . Eliminates corrosion, electrolytic action and dezincification of seat joint. Withstands higher temperatures than ordinary bronze or brass. Perfect for chemical, steel, rubber, paper and textile industries!

Nut-Black — Type 602 . . . 2 Stainless Steel Seats . . . Where carbon steel pipe is used and severe temperature or acid conditions are prevalent — eliminates necessity of an all stainless steel union.

Nut-Olive Drab — Type 603 . . . Moly Steel Seats . . . Offers extra strength, toughness and resistance against corrosion and provides Hardness Differential. The male seat is specially heat treated to give it a greater hardness than the female seat.

Nut-Gray — Type 604 . . . Moly to Silicon Bronze Seats Combines the advantage of types 601 and 603.

ROCKWOOD SPRINKLER COMPANY
2449 Harlow Street, Worcester 5, Mass.
Distributors in all principal industrial areas

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Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

"HARDSTEEL"

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Speed Up Material Handling

Here's a handy, mobile crane for lifting or loading jobs around your plant. Ideal for dismantling, moving or erecting machinery . . . loading and unloading structural iron, pipe, bars, lumber and equipment of all types. The UNIT 357 is self-propelled . . . rides on rubber at road travel speed . . . is easy to maneuver even in cramped yard conditions. Operated by ONE man . . . powered by ONE engine . . . swings in a 360° circle. Full vision cab gives complete visibility. Promotes Safety. Write for Catalog.

UNIT CRANE & SHOVEL CORP.
6607 W. Burnham Street, Milwaukee 14, Wis., U. S. A.

UNIT
CRANES • CLAMSHELLS • MAGNETS

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not only schedules,
But automatically checks with TIME, LINE and COLOR control

- Original cost and upkeep low.
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- Historical record to back it up.
- Bad situations show automatically.
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- Analyze 100 items in 10 seconds.

Effective Tools for Effective Management
WASSELL ORGANIZATION, INC. Westport, Conn.

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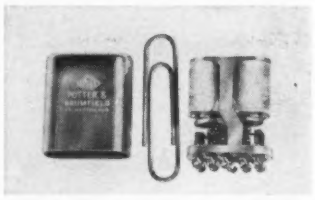
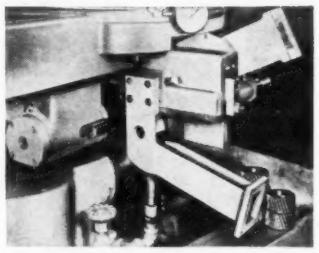
LATCHING RELAY
is micro-miniature in size



This dual coil crystal-case size SL magnetic latching relay operates on a 1-w, 3-millisecond pulse to either coil. It will switch loads up to 2 amp at 30 v dc resistive. Measuring 0.875 x 0.795 x 0.359 in., it operates in ambients from −65 to 125° C, and withstands 100-g shock and 30-g vibrations to 2000 cps. It is available with plug-in headers or hook-end solder terminals. Coils will carry continuous loads, if necessary. Made by **Potter & Brumfield, Inc.,** 270 N. Main St., Princeton, Ind.

▲ For more details circle NED-529 B8 on enclosed inquiry slip ▲

AUTOMATIC LOADING DEVICE
helps automate rotary gear finisher



Available as original equipment, or as a modification unit for all 870 Series rotary gear finishing machines, this automatic loading device is designed for automated lines. In operation, gears roll down gravity chute and are placed one at a time into a loading shuttle by a plunger. Gear is carried to shaving position and placed in mesh with finishing cutter. After finishing, shuttle returns gear to out position where a plunger moves it to ejection chute. Cycle repeats until parts supply is exhausted. Loading unit is standardized for gears up to 4-in. diameter, although it can be tailored to other sizes. Gaging gears to prevent entry of oversize parts is optional. Made by **Michigan Tool Co.,** 7204 E. McNichols Rd., Detroit 12, Mich.

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STORAGE RACKS
facilitate storage to plant ceiling

High-load-capacity end frame of rectangular tubing can extend effective warehouse storage space to the roof, permitting loads to be stacked to the maximum lift of any lift truck. Upright tubing is made of two structural angles welded together. Angles are gang punched to permit adjustability before welding. Racks are custom-designed to fit the needs of each warehouse. They have been tested with loads up to 25,000 lb and heights over 20 ft. Made by **Warehouse Storage Systems Co.,** Storage Rack Div., Penn Ave., Hatfield, Pa.

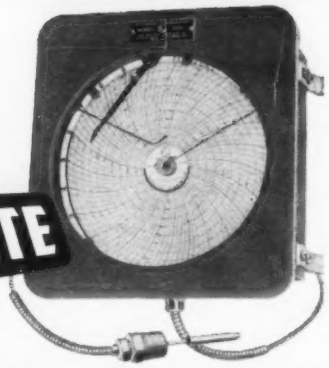
▲ For more details circle NED-531 B8 on enclosed inquiry slip ▲

BENCH-TABLE COMBINATION
converts from one use to another

Dual purpose Model 2800 bench-to-table unit serves either as a bench or table, permitting conversion of plant areas used for eating into an area for meetings or other gatherings. It is portable and foldable (see illustration), nesting in a 7-in. space when collapsed. The top folds down to form a back when used as a bench. Unit rolls on 3-in. rubber wheels. Rubber-tipped legs contact the floor for added support and "lock" it to the floor when it is occupied. The 15-in. table top is bonded melamine plastic, and the bench is 12-in. plasticized board. Lengths of 6, 7, and 8 ft, and heights of 27 and 29 in. are offered. Made by **Sico Mfg. Co.,** Dept. NED, 5215 Eden Ave. S., Minneapolis 24, Minn.

▲ For more details circle NED-532 B8 on enclosed inquiry slip ▲

A NEW Development from AUTO-LITE



INKLESS TEMPERATURE RECORDER!

The newest advance in temperature recording . . . Auto-Lite model 2200 operates completely without ink. It simplifies temperature recording for most processing operations.

- 2 small mercury batteries in case energize transistor oscillator connected to stylus arm.
- Stylus records temperature on 6" evenly calibrated sensitized chart.
- Battery life approximates 2000 hours.
- Records operating temperatures for 24-hour or 7-day cycles.
- Easily serviced — minimum maintenance.

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INDUSTRIAL THERMOMETER DIVISION
TOLEDO 1, OHIO
NEW YORK • CHICAGO • SARNIA, ONTARIO

Electric or mechanical chart drive available for either 24-hr. or 7-day rotation. In wall mounting, portable and self-contained type cases. Remote reading with capillary tubing. Temperature charts in ranges from −40°F to +550°F. Write for further information.

TEMPERATURE RECORDERS & INDICATORS

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USE EASY-IN EASY-OUT... SpiOlox

Retaining Rings
with compact 2 turn design
Eliminates trouble spots, costly machining and awkward parts!

Application pictures below show how simply and effectively cylindrical assemblies are positioned and locked by Spirolox! Unique *two-turn* design conforms to internal or external groove. Spirolox will not jump out because opening and closing force is resisted by friction between turns. Always provides a uniform shoulder! No gaps to interrupt uniform circumference; no lugs to create weak spots. Easy to flip out with screwdriver.

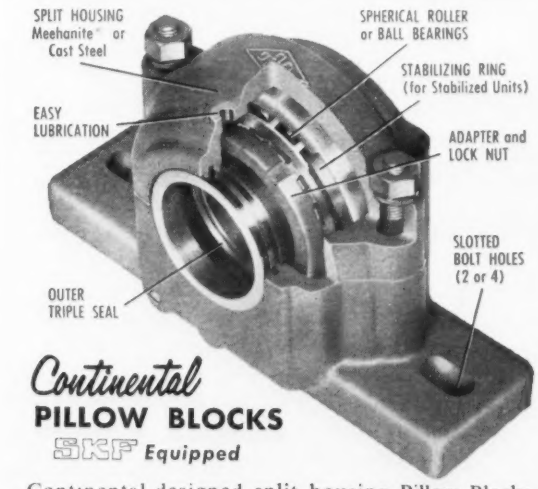
FREE TEST SAMPLES AND DATA BULLETIN
Send us blueprint of your retaining problem!
Thompson Products, Inc., Piston Ring Div. (Ramsey Corp.) Dept. F, St. Louis 8, Mo.

5762RRT

U. S. Pat. No. 2,450,425 and Foreign Pats. Other Pats. Pend.

SPIROLOX—the Better Way to Hold Moving Parts TOGETHER!

▲ For more details circle NED-534 B8 on enclosed inquiry slip ▲



Continental
PILLOW BLOCKS
SKF Equipped

Continental-designed split housing Pillow Blocks, equipped with either ball or roller bearings, to meet specific demands of modern industry. Made in all standard sizes from 1 15/16" to 8" shaft size. Triple sealed against dust and dirt to insure life of bearing. Require minimum lubrication attention and will give many years of dependable operation.

Write for complete details —

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
BIRMINGHAM, ALABAMA
CGC ATLANTA CLEVELAND DALLAS KNOXVILLE MEMPHIS MOBILE NEW YORK 17

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Snap-on provides specialized hand tool service across the board for industry

Production *Snap-on* offers a complete range of wrenches, sockets and specialized tools for product assembly.

Original Equipment *Snap-on* makes up custom-built tool kits which are included with new products shipped from the factory.

Maintenance *Snap-on* provides maintenance tools for servicing anything from plant facilities and machines to every type of vehicle.

Field Service *Snap-on* assembles special field service tool kits for repairing everything from diesel engines to business machines and appliances.

Whatever your tool problem, *Snap-on* can render a specialized service. Branch offices and warehouses are located in 51 cities throughout the U.S. and Canada.

*Snap-on is the trademark of Snap-on Tools Corporation.

SNAP-ON TOOLS CORPORATION
8110-B 28th Ave., Kenosha, Wis.

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KEEP MACHINES RUNNING

...reduce maintenance costs,

with **DEUBLIN ROTATING UNIONS**

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ **LEAKPROOF**
- ★ **CORROSION PROOF**
- ★ **EASY TO SERVICE**
- ★ **VIRTUALLY FRICTIONLESS**
- ★ **PRECISION BUILT FOR LONGER LIFE**
- ★ **INTERCHANGEABLE** with any other rotating union
- ★ **VERSATILE**—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ **MINIMUM TORQUE** makes it ideal for high speed applications

See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

104 *Write today for full details and prices.*

DEUBLIN COMPANY
1151 Waukegan Road
Glenview, Ill. (Chicago Suburb)

▲ For more details circle NED-537 B8 on enclosed inquiry slip ▲

SAVE $2000 *a year*

Banish old fashioned hand sweeping

Parker FLOOR SWEEPERS

FACTORIES

WAREHOUSES

SHOPPING CENTERS

Write today for further information on the complete line of Parker Manual and Power Sweepers

PARKER *Sweeper Company, Springfield, Ohio*
Dept. NE

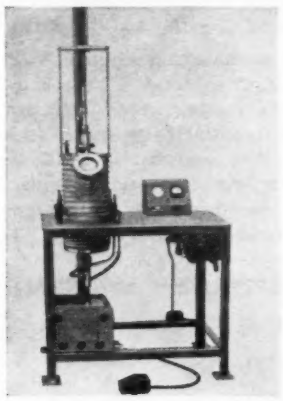
▲ For more details circle NED-538 B8 on enclosed inquiry slip ▲

FORK LIFT TRUCK
capacities up to 3000 lb

Such appliances as refrigerators, ranges, and washers can be placed, two at a time, into freight cars by the Morlift Majik-Loder, a sit-down type fork truck. Unit features a tilting mechanism which enables operator to tip over and lay the top row of items flat in car. Stabilizing clamp controls loads with pressure limited to 37 lb to avoid carton damage. Machines can be modified to fit individual handling problems. Capacities range up to 3000 lb, elevating heights upward from 84 in., and turning radius, 54 in. and up. Powered by continuous duty G-E direct current motor, unit will travel 10 mph. Made by **John Morrell Mfg. Co.**, 525 Highland Ave., Elgin, Ill.

▲ For more details circle NED-539 B8 on enclosed inquiry slip ▲

VACUUM ARC FURNACE
melts high-temperature, stable and reactive metals and alloys



Melting, alloying, consolidating, or refining high-temperature metals and alloys are performed in the Model F-10 laboratory vacuum arc melting furnace. It uses either consumable or nonconsumable electrodes and is designed for vacuum or inert gas melting of stable or reactive metals. The standard hearth handles a ½-lb button of titanium or an equivalent volume of other metals. Optional hearth has a maximum capacity of 3 lb.

Hearths are easily removable and many suitable shapes and configurations can be used. Vacuum pumping system consists of a Kinney KC-15 gas-ballasted mechanical vacuum pump for rapid pump-down. Special valving will hold the pressure at any level from 2 psi above atmospheric pressure down to a vacuum of 10 microns. Casing is water-jacketed and hearth and electrode holder are water-cooled. Made by **New York Air Brake Co.**, Kinney Mfg. Div., 3529 Washington St., Boston 30, Mass.

▲ For more details circle NED-540 B8 on enclosed inquiry slip ▲

GENERAL PURPOSE LATHE
has 12¾-in. swing over bed and variable speeds to 1600 rpm

Headstock spindle of the 5400 Series Clausing general purpose lathe turns on Timken "zero precision" tapered roller bearings. The spindle has a 1⅜-in. bore, 1 1/16-in. lever type collet capacity, and a hardened nose. Lathe has flame-hardened ways and a quick-change mechanism for selection of 54 threads or feeds. Variable speed countershaft offers any speed from 35 to 270 rpm and 210 to 1600 rpm while the lathe is running.

Lever-controlled clutch and brake permit instant spindle starts and stops without stopping the motor. Countershaft spindle is driven through variable speed cog belts and the lathe spindle through three V-belts. Lathe has 12¾-in. swing over bed; 7⅝-in. swing over cross slide; 23, 35, and 48½-in. centers; and 1⅜-hole through the spindle. Ten-speed ball bearing countershaft for speeds from 35 to 1600 rpm is optional. Made by **Atlas Press Co.**, Clausing Div., 2623 N. Pitcher St., Kalamazoo, Mich.

▲ For more details circle NED-541 B8 on enclosed inquiry slip ▲

BURR, CLEAN, FINISH, POLISH

in a one-step operation never before associated with abrasives!

Discover Brightboy's different working action—abrasive and rubber, working simultaneously!

Multi-Use Brightboy
FINISHES ALL METALS; PLASTICS LAMINATED MATERIALS, WOOD, GLASS

Ask your dealer for STOCK BRIGHTBOY NUMBERS FOR YOUR NEEDS, and for the Brightboy catalog listing applications, machine speeds. Write us if he cannot supply you or on any problem in which finishing is involved. • *Ask him or write us for "Notes from The Brightboy Service Engineer", describing applications recently reported by our service engineers.*

WELDON ROBERTS **Brightboy** RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION WELDON ROBERTS RUBBER CO.
95 North 13th Street
Newark 7, N. J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

▲ For more details circle NED-542 B8 on enclosed inquiry slip ▲

Low Cost Way to Dump and Store

New Model F IA Pallet Type Phil-Dump

With the use of a lift-truck, a large variety of bulk materials are easily loaded and dumped or stacked and stored with this new labor-saving Phil-Dump. Redesigned to avoid spillage, this money-saving device boasts the sturdy construction for great durability for which all Phillips equipment is famous. Features are a non-slip pallet slot and a patented safety lock which permits automatic but not accidental dumping. Capacity is 1 cu yd. Send order to Salem-Brosius.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.

PHILLIPS MATERIALS-HANDLING EQUIPMENT

Manufacturers Since 1863

▲ For more details circle NED-543 B8 on enclosed inquiry slip ▲

Patent No. 2,722,372.
Other Patents Pending.

Quickdraft
THE WORLD'S MOST EFFICIENT POWER EXHAUSTER FOR INDUSTRY

★ STATIC PRESSURE UP TO 12-INCHES
★ NO MOTORS OR FANS IN EXHAUST LINE
★ NEEDS NO STACKS
★ ACID RESISTING FINISHES

IMPORTANT NOTICE For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (P.V.C.), and with plastic and Fiberglas coatings.

Quickdraft provides up to 12-inches static pressure for **exhausting** paint spray, abrasives, corrosive gases, noxious fumes and high temperatures . . . **moving** grains, powders, salts and trimmings . . . **recovering** metallic waste from foundry stacks. It reduces maintenance costs . . . eliminates down-time for cleaning and replacing fan blades. In addition, it vents incinerators, heating plants and water heaters . . . providing constant draft for efficient and economical combustion. Write for engineering data on your application, today.

Quickdraft CORPORATION P. O. Box 87-L Dueber Hampden Building Canton 1, Ohio

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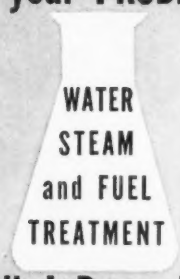
SOLVE your PROBLEMS of



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To preserve your equipment and to keep it operating continuously, efficiently, and economically, is the purpose and end result of the use of specialized Western formulas and the individual technical service that goes with them. Whatever your water, steam or fuel treatment problem is, it can be solved by Western Chemical Company. That is our business and it has been for over 65 years.

ONE SOURCE FOR COMPLETE TECHNICAL ASSISTANCE

In the series of Western Technical Bulletins you will find the story behind your particular problem — its causes and prevention. Without obligation, take advantage of this opportunity which can lead to definite savings in both costs and headaches. Write today for complete information.

WESTERN CHEMICAL CO. 714 Washington St. Kansas City 5, Mo.

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To Identify Stainless Steels

send for your Chart *Today!*

To identify stainless steels that may have become mixed in stock —or stainless scrap—use Carpenter's chart for segregating stainless steels. It illustrates and explains how and when to use each of 11 tests. Typical reactions are given for the nitric acid, magnet, spark, hardness, muriatic acid, sulphur spot, nickel spot, and stabilization tests. Return the coupon below for your copy now.

THE CARPENTER STEEL COMPANY
118 W. Bern St. • Reading, Pa.

Gentlemen: Without obligation, please send me your chart for identifying Stainless Steels.

NAME_____ TITLE_____
(Please Print)
FIRM_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

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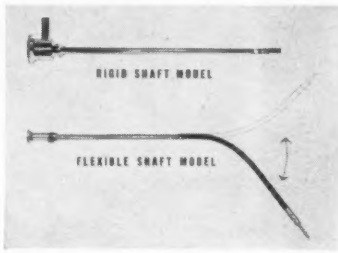
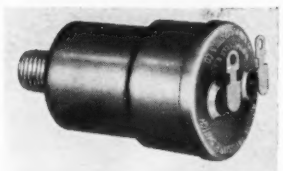
BORE INSPECTION SCOPE
permits view of hidden surfaces



This precision optical instrument is adaptable for inspection of almost any hidden surface. Designated the Bore - O - Scope, device is available in sizes from 3/16 in. OD and up in lengths from 2/3 to 15 ft. Light source can be any of several types of lamps, which can operate on power supplied by accessory source from 2½ v and up. A direct light beam is usually used, but diffused light types are available. Special models have sealed objective and ocular ends for immersion in liquids. Coated lenses and mirrors assure optimum viewing with either rigid or flexible shaft models. Distributed by **Size Control Corp.**, 2501 W. Washington Blvd., Chicago 12, Ill.

▲ For more details circle **NED-547 B8** on enclosed inquiry slip ▲

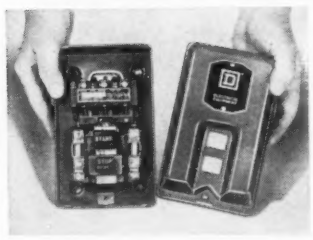
SUBMINIATURE PRESSURE SWITCH
±0.5 psi accurate at −85 to 200° F



Model RR-30 subminiature absolute pressure switch for use under vibrations up to 1000 cps and 7 g, will hold ±0.5 psi accuracy from −85 to 200° F. Particularly suited for use on aircraft, missiles, parachutes, balloons, wave-guides, or vibrating equipment, switch is offered in nominal pressure settings from 5½ to 23½ psi. It has a 2-psi differential between on and off. Switch is 2 7/32 in. long and has 1 5/32-in. diameter, weighs 2 oz, and has single-pole single-throw contacts rated 28 v dc, or 110 v ac, 5 amp noninductive. Made by **Newark Controls Co.**, 13 Ward St., Bloomfield, N. J.

▲ For more details circle **NED-548 B8** on enclosed inquiry slip ▲

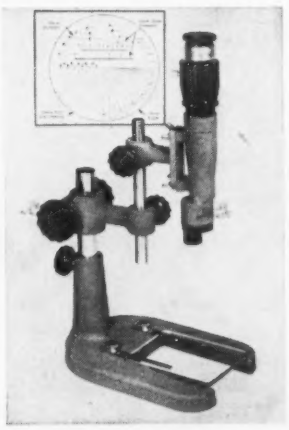
MANUAL STARTERS
for motors up to 7½ hp



Heavy duty, toggle-action mechanism incorporated in Class 2510 integral horsepower manual starters gives positive snap-action opening and closing of contacts, without dead - center position. NEMA Size 0 and 1 units control motors up to 7½ hp. Trip-free overload protection is provided by melting alloy relays, and self-centering pushbuttons give visual indication of an overload condition. Rated up to 600 v ac or 250 v dc, the starters are available with two, three, or four-pole construction in open and enclosed models. Pressure wire connectors are found on all wiring terminals. Made by **Square D Co.**, 4045 N. Richards St., Milwaukee 12, Wis.

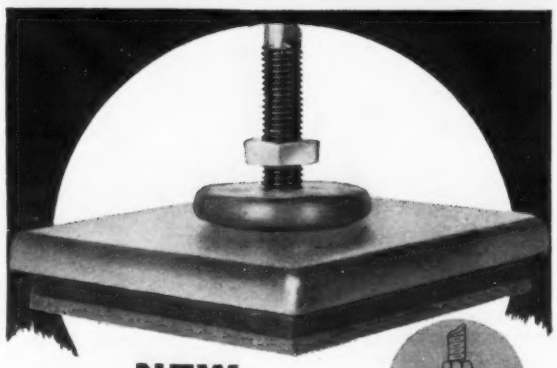
▲ For more details circle **NED-549 B8** on enclosed inquiry slip ▲

MEASURING MICROSCOPE
has pocket comparator at eyepiece



Measurements can be read directly from the reticle of this measuring microscope which utilizes a pocket comparator at the eyepiece to project an image of the reticle pattern directly on the work. No calibration is required. Instrument provides a 6-in. working distance between objective and the object in view. Design permits seeing and measuring in deep places, through glass, or on compressible substances. Other uses include measurement of small parts, linear dimensions, diameters, radii, and angles. Linear dimensions are given in inches and millimeters. Microscope with comparator sells for $94.50. Offered by **Edmund Scientific Co.**, 180 E. Gloucester Pike, Barrington 25, N. J.

▲ For more details circle **NED-550 B8** on enclosed inquiry slip ▲



NEW LEVEL-RITE Machinery Mounting

The new Level-Rite combines the features of Unisorb with the advantages of a rugged, easy-to-use device for precise leveling of machines. Machines are completely "mobilized." One unit required for each machine leg, with load ratings to 7500 lbs. per unit.

Exclusive Screw-Post Design . . . Machine legs mounted on special leveling screw and plate assembly, which rests in all-steel base plate. Machine is quickly and easily leveled by simply rotating the square top of the leveling screw, then securing lock nut. Machines stay level.

No bolts, lag screws or cement . . . Level-Rite eliminates all need for anchor bolts or screws. Designed so compression provides positive hold, no "walking" or creeping under the toughest side loads.

Superior Unisorb Vibration Dampener . . . Industry's most efficient isolator reduces transmitted vibration up to 85%. Unisorb will not deteriorate, is resilient, and is impervious to cutting fluids and cleaning compounds.

Send for New Data Sheet and Prices, today.

The name to remember is . . . the **FELTERS CO.** 224 SOUTH ST., BOSTON 11, MASS. *Manufacturers of Felt and Felt Products*

UNISORB

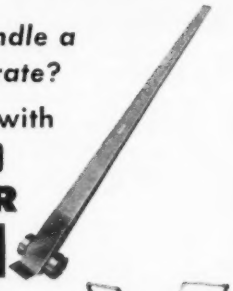
▲ For more details circle **NED-551 B8** on enclosed inquiry slip ▲

Did you ever try to handle a HEAVY roll of paper, drum or barrel?

You can do it easily with the IRONBOUND ROL TRUK

Did you ever try to handle a HEAVY machine or crate?

You can do it easily with the IRONBOUND PRY BAR

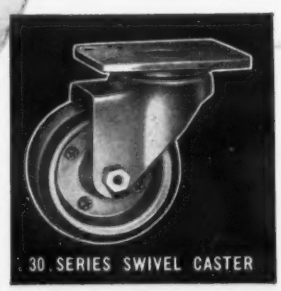


IRONBOUND
55 Hoffman Place • Hillside, N. J.

▲ For more details circle **NED-552 B8** on enclosed inquiry slip ▲

CUTS COSTS

J&J SMOOTH ROLLING NOISELESS CASTERS with double ball bearing swivels



. . . your most *economical* buy because they are longer-wearing, offer completely dependable, trouble-free performance, thus making them *lowest in cost to service.* Don't waste your "replacement" dollars on casters of questionable service value. Specify J & J casters, the smoother-rolling, longer-rolling, cost-controlling kind.

Distributed nationally

Jarvis AND Jarvis, Inc. PALMER, MASSACHUSETTS

In Canada: Jarvis & Jarvis of Canada, 1744 William St., Montreal, Quebec

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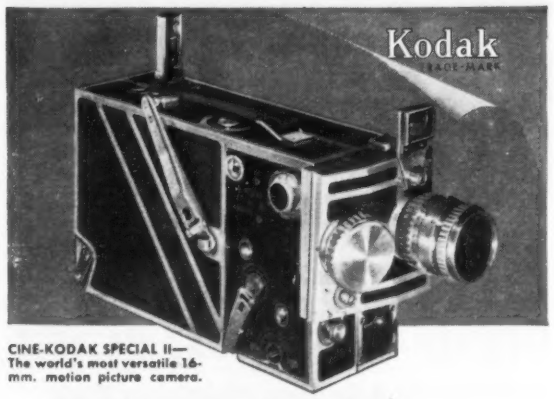

CINE-KODAK SPECIAL II—The world's most versatile 16-mm. motion picture camera.

Make movies that work for you!

In almost every industrial activity—engineering, manufacturing, employee training, research, safety and methods evaluation—in-plant movies are the fastest, easiest, and most effective method for putting across your story.

And for on-the-job movie making, many leading industrial companies have chosen the Cine-Kodak Special II Camera. It has the versatility to handle almost any type of job. Yet its simplicity of operation enables you to get high-caliber results almost as easily as taking home movies.

WRITE FOR FREE BOOKLET, V1-3, describing the Cine-Kodak Special II.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

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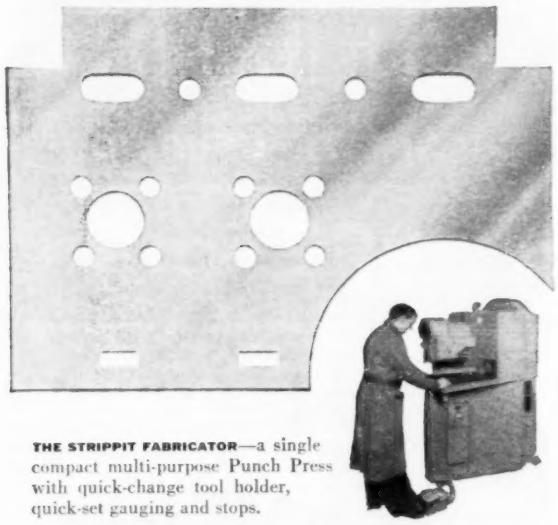


THE STRIPPIT FABRICATOR—a single compact multi-purpose Punch Press with quick-change tool holder, quick-set gauging and stops.

from blueprint to product in 5 minutes

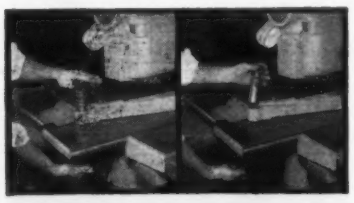
with the STRIPPIT

FABRICATOR

Short run? Complicated pattern? If it's sheet metal up to ¼" mild steel, if it's punching, notching or nibbling, it's profitable on a Strippit Fabricator!

Set up in minutes! Punches and dies are changed in 30 seconds or less, and Strippit guided punches need no aligning or adjusting. Back stop with precision gauge is instantly set by a locking knob. Self-tripping finger stops on gauge bars provide multiple stopping as the work is moved rapidly under the punch. A switch gives you single punching or 165-stroke-a-minute nibbling, and all tools are within quick reach in attached "file drawers" or shelves. The Fabricator is more than a one-machine shop—it's a whole system of quick-change, high-profit fabrication used by thousands of shops.

What's more, you can add the Strippit Positive Duplicator for high-speed punching in medium runs—plus the Dupl-O-Scope to punch Duplicator templates right from the drawing, in a few minutes. Write today for details and demonstration at your plant by the Strippit mobile unit. Warehouse stocks in Chicago and Los Angeles.



TOOL HOLDER is pulled out, for instant removal of die and punch assembly, ready for the next interchangeable tool. 1¼" diameter capacity holder shown, 3½" diameter holder also available.

A UNIT OF HOUDAILLE INDUSTRIES, INC.

WALES STRIPPIT COMPANY

227 Buell Road, Akron, New York

Manufactured in Canada by Strippit Tool & Machine, Limited, Brampton, Ontario

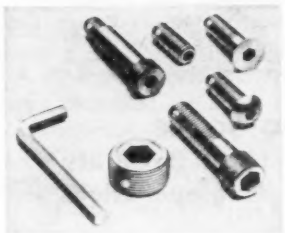
▲ For more details circle NED-555 B8 on enclosed inquiry slip ▲

VACUUM-TUBE VOLTMETER features printed circuit design

Meter of this Model 904 printed circuit, voltage-regulated, vacuum-tube voltmeter can be tilted up, down, left, or right at any angle for convenience in reading. It also has a Magic Lead switch that automatically shorts or opens test leads for zero and infinite ohms adjustment, without disturbing the circuit being measured. Meter reads peak-to-peak and rms voltages. Frequency range is up to 250 mc, while voltage range goes up to 30,000 v with various probes. It is available in wired or kit form. Made by **Precise Development Corp.**, Dept. NED, 2 Neil Court, Oceanside, N. Y.

▲ For more details circle NED-556 B8 on enclosed inquiry slip ▲

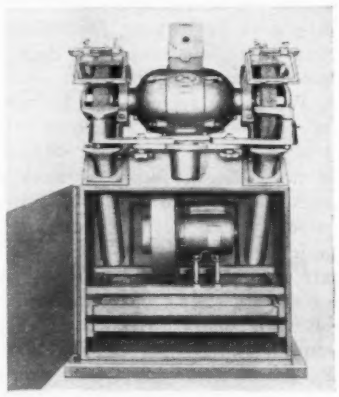
SELF-LOCKING SOCKET SCREWS in No. 0 to 1½ in. diameter sizes



Self-locking socket head cap screws with a nylon pellet inserted in the threaded section are available in all diameters from microsize No. 0 to as large as 1½-in. diameter. While the screws will not work loose under severe vibrations, they can be removed easily. They also form an effective seal against leaks resulting from gas and fluid flow along the helical path of the threads. Locking action is retained at temperatures from −70 to 250° F through repeated heating and cooling cycles. Made by **Cleveland Cap Screw Co.**, 4444 Lee Rd., Cleveland 28, Ohio.

▲ For more details circle NED-557 B8 on enclosed inquiry slip ▲

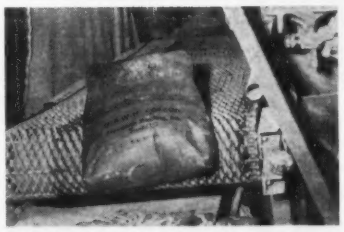
GENERAL PURPOSE GRINDER features built-in dust collector



Fabricated base which forms the pedestal of the Model 500 general purpose grinder contains a built-in 1, 2, or 3-hp dust collector. Abrasive particles in the poluted air are directed downward and deposited after being drawn into the filter cabinet. Air is then directed upward through a glass fiber pad and returned to the room from the cabinet top. Suction fan and ¾-hp motor operate in clean air. Rating is 1000 cfm at 4-in. pressure. Grinder features a totally-enclosed motor, pushbutton starter with overload protection, enclosed adjustable wheel guards, sealed antifriction bearings, tool tray, and lift-out water pot. All rotating parts and spindles are dynamically balanced. Entire unit is 32½ in. wide and 20 in. deep. Made by **United States Electrical Tool Co.**, 3642 Llewellyn St., Cincinnati 23, Ohio.

▲ For more details circle NED-558 B8 on enclosed inquiry slip ▲

BELT CONVEYOR woven wire type handles bags



Bags of cement, lime, and other bulk materials can be carried by this self-cleaning belt conveyor of woven wire. A set of adjustable spring shock absorbers supports the roller platform and eliminates bag breakage. Springs can be adjusted to provide the correct amount of shock absorption for bags of various weights. Conveyor is available as a portable unit on casters or as a fixed, permanent installation. Constant or variable speed drive is offered. Made by **Hewitt-Robins, Inc.**, Dept. P, 666 Glenbrook Rd., Stamford, Conn.

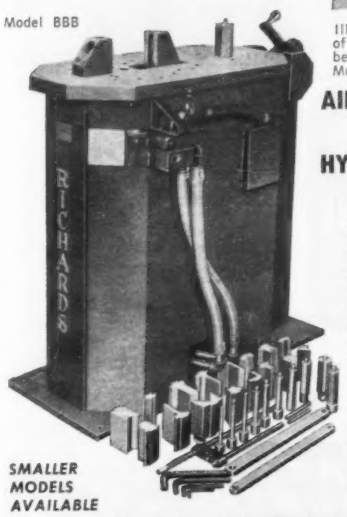
▲ For more details circle NED-559 B8 on enclosed inquiry slip ▲

Multiform

BIG BROTHER BENDER

Illustrated above are a few of the many forms that can be produced efficiently on the Multiform Bender.

Model BBB



SMALLER MODELS AVAILABLE

AIR OPERATED MODELS IN FOUR SIZES

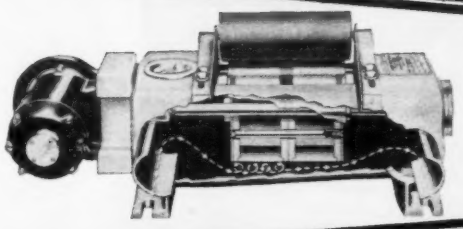
HYDRAULIC—3 MODELS

The heavy duty Big Brother Bender is designed for fabricating bus bars, brackets, fixtures, etc., without special tooling. Air controlled with finger tip response. Comes complete with dies, mandrels and wrenches—punching and blanking dies extra. Will punch holes up to 1" and form material up to ¼" thick by 4" wide. We also build smaller models, hand or air operated, for bending materials up to ⅛" x 1½".

Send for illustrated folder M6

J. A. RICHARDS CO. Myrtle & Pitcher Sts. Kalamazoo, Mich.

▲ For more details circle NED-560 B8 on enclosed inquiry slip ▲



NEW

CFC MAGNETIC SEPARATOR

Keeps Coolants Free of Ferrous Contaminants

The new low-cost CFC Magnetic Separator continuously and automatically removes ferrous chips and sludge from coolants. It takes less than 2 square feet of floor space — can often be installed between columns. Unit includes totally enclosed gearhead motor. No separate pump is required. Available at prices as low as $325. Write for technical literature to Department NE.

COMMERCIAL FILTERS CORPORATION
Melrose 76, Massachusetts
Plants in Melrose, Mass. and Lebanon, Ind.

▲ For more details circle NED-561 B8 on enclosed inquiry slip ▲

AIR POWER at LOW COST

Honed cylinders, lightweight automotive-type pistons, a precision-balanced crankshaft — features like these make Quincy Compressors the choice for efficient, low-cost operation. Safe-Q-Lube system protects bearings, provides smooth loadless starts and stops for longer compressor life, too. Models for every industrial need to 90 C.F.M.

Quincy COMPRESSORS

SEND FOR CATALOG

QUINCY COMPRESSOR CO.,
Dept. NED-258 QUINCY, ILLINOIS

Air Compressors Exclusively

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Speed silver brazing

Lucas-Milhaupt

NO TANGLE NOTCH COIL RINGS

1. Quickly snapped off coil and placed on part.
2. No tangling or distortion
3. Minimum amount of precious alloy for positive bond.

RING DIAMETERS from ¼" to 12" — + .001.

WIRE SIZES .020 to .093.

FREE 16 page booklet gives you all the facts on better brazing

LUCAS MILHAUPT Engineering COMPANY

5070 So. Lake Drive, Cudahy, Wis.

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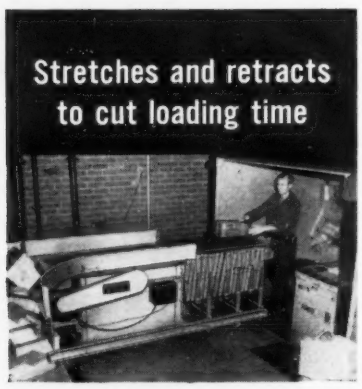
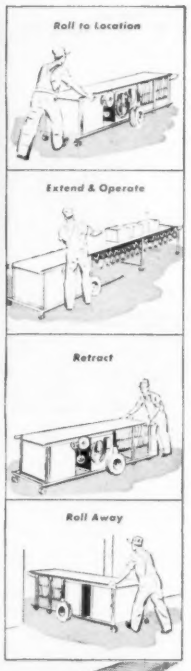
Stretches and retracts to cut loading time





THE Standard EXTENDOVEYOR

With its extendable belt carrier, this portable power-belt conveyor easily reaches into confined spaces . . . speeds loading of trucks, trailers, boxcars. Handles a wide range of commodities . . . can be moved and operated by one man. Choice of two models (one-way and two-way extendable) and five sizes up to 46 feet extended length.

WRITE for Extendoveyor Bulletin 64 — Address Dept. K-2.

STANDARD CONVEYOR CO.
North St. Paul 9, Minn., U.S.A.
Canada: International Equipment Co., Ltd., Montreal • Toronto Hamilton • Edmonton • Vancouver

Standard GRAVITY & POWER CONVEYORS

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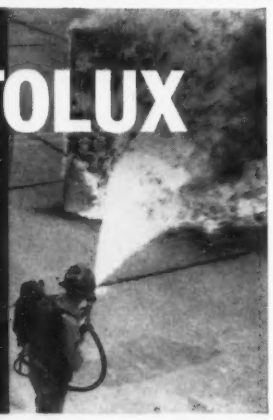
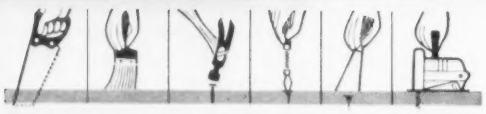
ASBESTOLUX

America's NEWEST all-purpose building board

completely fireproof— as workable as wood





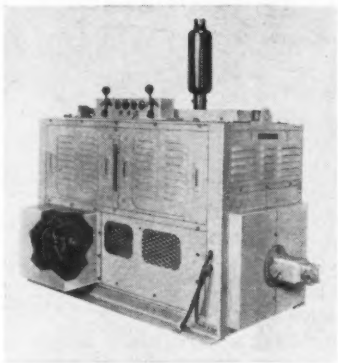
Proved in service since 1951, Asbestolux is now available in the U.S.A. Here is a new kind of fireproof asbestos board. It can be nailed without drilling . . . can be sawed with ordinary saw blade. It's fireproof, completely inert. It's light, easy for one man to carry. Can be fabricated on the job.

WRITE TODAY FOR FREE SAMPLE

NAAC NORTH AMERICAN ASBESTOS CORPORATION
Board of Trade Building, Chicago 4, Ill. • Phone WAbash 2-1338

▲ For more details circle NED-565 B8 on enclosed inquiry slip ▲

HANDLING TRUCK POWER UNIT produces electric, hydraulic power



Materials handling trucks with capacities from 30,000 to 200,000 lb can be equipped with RD Series of diesel-electric power packages which generate electric power for truck movement, as well as hydraulic power. No intermediate electric motors are required. Units operate at a constant speed from no-load to full-load, providing constant hydraulic power to actuate brakes, steering, hoist, tilt, revolving head, and other operations. Truck tractive power is supplied upon demand by a generator with separate excitation that produces only the energy required for the job. Operator controls vehicle speed through a lever which regulates voltage. Only forward and reverse contactors are required. Made by **Ready-Power Co.**, 3832 Grand River Ave., Detroit 8, Mich.

▲ For more details circle NED-566 B8 on enclosed inquiry slip ▲

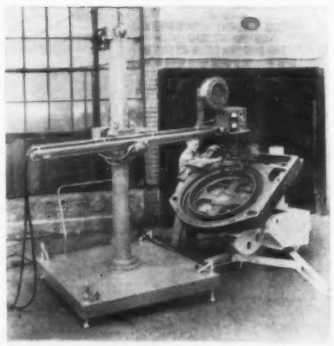
WEIGHT RECORDING SCALE memory feature lends flexibility to speed-up weighing operations

Versatility in recording both at the scale and remotely, plus a new memory feature of the Printweight 400 series weight recording scale achieves speed-up of weighing operations. Equipment prints weight data in large, clear figures anywhere on office forms or tickets up to 8½ x 11 in. in size; identifies these weights by time and date; and transmits data in digital form to remote office machines.

Weight is recorded or transmitted, even after load is removed from platform. Another load can be placed on the platform without affecting the stored data. Weight figure is always printed, even when unit weights are used. Weights, which increase dial capacity, can be identified by selective numbers available in keyboards with from 6 to 12 banks. Models are offered for sheets and ticket records, for single or double strips, or combination of strips along with sheet or ticket. High printing speed stems from the simplicity of using only a single coding disc. Made by **Toledo Scale Corp.**, Telegraph Rd., Toledo 13, Ohio.

▲ For more details circle NED-567 B8 on enclosed inquiry slip ▲

WELDING HEAD MANIPULATORS allow welding an 8 ft seam with 8 ft of under-boom clearance



Standard automatic welding heads are positioned with extreme accuracy on medium-size fabrication jobs or small production runs by Bantam series of welding head manipulators. Used primarily with work-holding positioners or turning fixtures, these manipulators make possible straight seam welds up to 8 ft long and provide 8 ft of under-boom clearance.

Units feature 360-degree boom rotation, infinitely variable welding speeds up to 87 ipm, and a base equipped with integral wheels for mobility and leveling screws for accurate positioning. Accuracy is consistent, even while handling boom-tip loads up to 250 lb. Longitudinal boom travel is controlled by electrically-driven mechanical variable-speed transmission, while boom elevation is accomplished with an integral manual winch. Made by **Lewis Welding & Engineering Corp.**, Welding Div., 14 Interstate St., Bedford, Ohio.

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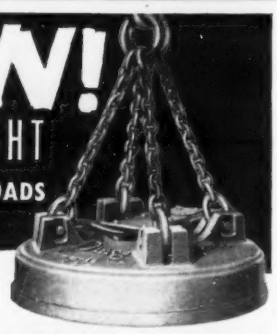
NEW! LIGHTER WEIGHT FOR GREATER PAYLOADS



DINGS ALUMINUM-WOUND LIFTING MAGNETS

• **Exclusive Anodized Aluminum Wire** is insulated by an oxide coating to eliminate the need for insulating tape, required in all other aluminum- or copper-wound lifting magnets. Dings lightweight design gives lifting capacity equal to much heavier units.

• **Greater Payloads** are assured with lighter weight. You can now use larger, more powerful Dings Aluminum-Wound Magnets on cranes previously limited to handling smaller magnets.

Get complete information about the many other money-saving features of the ONLY lifting magnet which gives maximum lifting power with light weight. Write for Bulletin B-1401-A.

Dings

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave. • Milwaukee 46, Wisc.

LM-158-1/9

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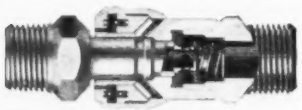
HANSEN QUICK-CONNECTIVE PUSH-TITE COUPLING

Provides Instant Automatic Flow or Shut-Off

To connect a Hansen Push-Tite Coupling, you merely push the Plug into the Socket with one hand. Flow is instantaneous.

To disconnect, push back sleeve on Socket . . . Coupling disconnects and flow is shut off instantly and automatically. No tools required. When Coupling is connected, Plug is free-swiveling, thus eliminating any possibility of kinks in hose.



Two-way shut-off and straight-through Couplings also available.
WRITE FOR CATALOG

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

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get the facts on Silicone Based Paints

. . . to improve product finishing . . . reduce maintenance costs

Send for this brochure and list of leading manufacturers of paints formulated with Dow Corning Silicones.

first in silicones

Address Dept. 542

Dow Corning Corporation
MIDLAND, MICHIGAN

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GET THE LATEST INFORMATION ON SUPER PRESSURE TUBING

FREE

Be sure to add this useful bulletin on super pressure tubing to your file of technical data. It covers sizes, tolerances, tempers, lengths, and includes a handy table of minimum burst pressures for various sizes. Other sections cover the following: single and composite wall tubing; methods of manufacture; special inspections; recommended fabrication procedures; and many applications.

Superior manufactures super pressure tubing in sizes ranging from ¼ in. OD x 3/32 in. ID, to ¾ in. OD x 1/16 in. ID. It can contain pressures varying from 15,000 to 100,000 psi. This tubing is subject to rigid testing and inspection, and all orders are 100% hydrostatically tested before shipment.

Call on Superior for all your small tubing needs. We produce tubing in over 63 analyses, including stainless, carbon and alloy steels, nickel and nickel alloys, beryllium copper, titanium and zirconium.

SEND FOR YOUR FREE COPY OF DATA MEMORANDUM #22

Superior Tube

The big name in small tubing
2018 Germantown Ave.
NORRISTOWN, PA.

All analyses .010 in. to ⅝ in. OD—certain analyses in light walls up to 2½ in. OD

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picked for PACKAGE BOILERS

Yarway Type "B" Seatless Tandem Blow-Off Valve with angle valve sectioned to show balanced sliding plunger.

• Because a good blow-off valve makes good package boilers even better—leading package boiler makers use Yarway Blow-Off Valves.

You can specify Yarways, too! Yarway Seatless Valves have no seat to score, wear, clog or leak—give free, unobstructed flow and drop-tight shut-off.

Bulletin B-426 gives the full story. Write for it today.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.
Branch Offices in Principal Cities

YARWAY **SEATLESS BLOW-OFF VALVE**

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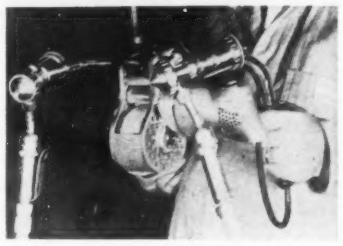
FIBER-RESIN SPRAY GUN
operated by one man, it deposits up to 15 lb of laminate per minute



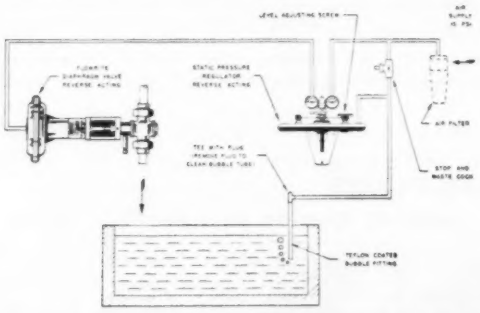
Activated resin and chopped glass fiber strands are sprayed simultaneously by this Fiber-Resin Depositor. Operated by one man, the three-way gun will deposit up to 15 lb of high strength laminate per minute. Applications include construction of prototype shapes, boats, motor shrouds, truck bodies, chemical tanks and sinks, floors and walls, liners, and flat and corrugated sheet.

Gun consists of roving cutter combined with two resin spray guns mounted together. One head carries plastic and accelerator, the other plastic and catalyst. The two streams of resin and the one stream of glass fiber meet outside the gun in mid-air. As many as three strands of roving can be chopped at one time, with lengths varying from ⅜ to 4 in. Gun operates on 110 v ac in conjunction with compressed air. Process is being licensed on royalty basis by **Rand Development Corp.**, Dept. N, 13600 Deise Ave., Cleveland 10, Ohio.

▲ For more details circle **NED-574 B8** on enclosed inquiry slip ▲

LIQUID LEVEL CONTROL SYSTEM
keeps level within ¼-in. variance

Liquid levels are kept from varying more than ¼ in. by the Powers bubbler system. The end of an air line, pumping 15 psi or less is placed below

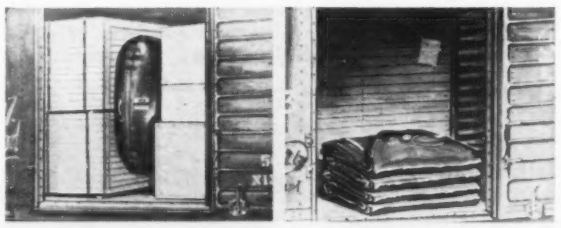


liquid surface, causing a slight bubbling action in the liquid. Air pressure in line is also transmitted to static pressure regulator. If liquid level drops, liquid pressure on bubbler drops. Pressure change is transmitted back to regulator which, in turn, repositions diaphragm control valve on liquid supply line. Liquid level can be adjusted over range of 1½ in. Available from **Powers Regulator Co.**, Dept. NDC, 3434 Oakton St., Skokie, Ill.

▲ For more details circle **NED-575 B8** on enclosed inquiry slip ▲

INFLATABLE CARGO CUSHIONS
absorb shock, prevent impact damage when used to hold cargo in position

Filling voids in loaded freight cars, trucks, and air and sea cargo compartments with Brace-Fast inflatable rubber cushions protects shipments from im-



pact damage by absorbing shocks during transit. Line of dunnage cushions makes possible the elimination of bracing and shoring materials, saving in time, and more rapid loading and unloading. Loss from in-transit damage is minimized. Cushions also increase freight car capacity, as much of area used for bracing is filled with cargo.

Cushions are offered in standard 4 x 4, 4 x 5, and 4 x 6-ft sizes. Inserted alone or in multiples, they are inflated sufficiently to compress the load into an integral structure. After deflation at destination, they are returned to the shipper at low cost. The 33-lb cushions consist of an outer cushion of neoprene-coated nylon duck and a replaceable bladder. In-service pressure is normally 3 to 5 psi. Made by **New York Rubber Corp.**, 100 Park Ave., New York 17, N. Y.

▲ For more details circle **NED-576 B8** on enclosed inquiry slip ▲

NEW and COMPLETE CATALOG
Cutters, small tools and accessories

Here is our new, enlarged catalog with 1375 different items listed and described — more than 230 illustrations. Such essential tools as cutters, vises, arbors, rotary tables, chucks, collets, master copy type and other tool room and production line necessities are all within the covers of this 52-page book. Yours without obligation on letterhead request.

56-7a

GORTON

GEORGE GORTON MACHINE CO.
1902 Racine St. Racine, Wisconsin

A 8929-1/9-R2

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NO GEAR REJECTS IN A HUNDRED

Because all *Industrial Cut Gears* have Dimensional Tolerances Held Closer Than Heretofore Thought Practical!

Specify "I.G." gears and let your Quality Control Department relax. Assembly Ready I.G. gears have reduced percentage of rejects to the vanishing point. For precision cut gears—delivered promptly—let I.G. become your dependable Gear Department.

Write for complete, FREE "Gear Packet" showing Industrial Cut Gear products, applications, and services.

INDUSTRIAL GEAR MFG. CO.
4521 W. Van Buren St., Chicago 24, Ill.

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Saginaw **sets the pace for industrial casters**

Saginaw

get all the facts about the casters that are engineered for modern material handling . . .

SAGINAW PRODUCTS CORPORATION
53 SAGINAW 3, MICHIGAN

PLEASE SEND ME YOUR NEW ENGINEERING MANUAL NO. C-56

NAME _____
COMPANY _____
ADDRESS _____

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PHILLIPS OR SLOTTED
TAPPING SCREWS BY Southern

PRECISION-MADE TO ESTABLISHED USA STANDARDS in STEEL, ALUMINUM or STAINLESS FLAT, ROUND, OVAL, PAN, TRUSS, HEX TYPES: A, B, C & F

Over one billion Southern screws in stock. Four Southern Warehouses (New York, Chicago, Dallas and Los Angeles) mean service with a capital S!

Wire or phone your requirements, or write Southern Screw Co., Box 1360, Statesville, N. C.

A, B, C & F TAPPING SCREWS
STOVE BOLTS
MACHINE SCREWS & NUTS
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Southern SCREW COMPANY STATESVILLE • NORTH CAROLINA

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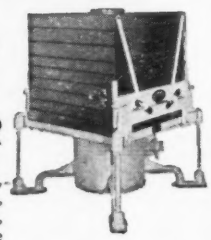
Sifts huge volumes with Big Savings in Floor Space

RICHMOND SPROUT-WALDRON
Gyro-Whip SIFTER



Noted for huge output, amazingly compact design, and sanitary operation, these sifters are available in sizes ranging from 3-sieve, floor-mounted models to free-swinging super-sifters with 180 sieves. Stainless steel and wood construction. Can sift from 2 mesh up to 325 mesh. They handle any product that can be mechanically separated. Aspirator tips to air wash graded products can be provided.

Other Sprout-Waldron size classification equipment includes revolving reels, shaking and gyrating screens, air and magnetic separators, and graders. Write for details.

Write for Bulletin 135-A

SPROUT-WALDRON
Manufacturing Engineers Since 1866
8 LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION—MIXING & BLENDING — BULK MATERIALS HANDLING — PELLETING & CUBING — PRODUCT CLASSIFICATION

IN/502

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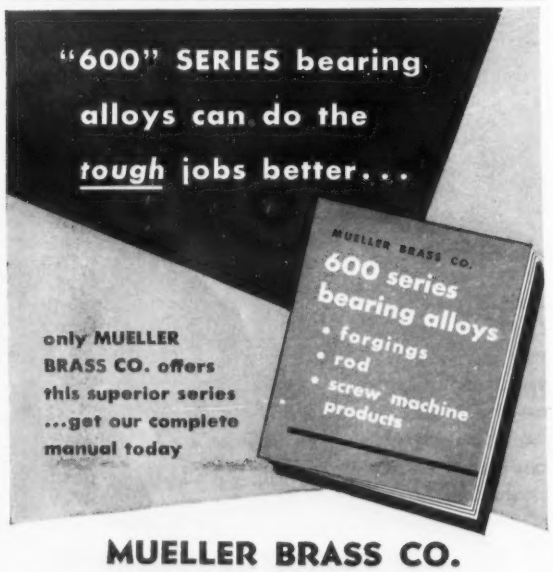
"600" SERIES bearing alloys can do the tough jobs better...



only MUELLER BRASS CO. offers this superior series ...get our complete manual today

MUELLER BRASS CO.
PORT HURON 37, MICHIGAN

please send me a copy of your
ENGINEERING MANUAL FM-3000
NAME
COMPANY
ADDRESS

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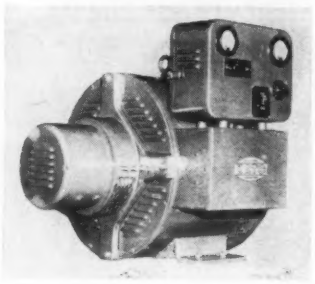
60-CYCLE GENERATORS
single and three-phase units



Only one heavy duty, grease - sealed - for - life ball bearing is used on this line of improved close - coupled, 60-cycle generators, as the drive end is supported by the gasoline or diesel driving engine. Two-bearing, close-coupled units can also be supplied. A sleeve in the armature fits over an extension of the main rotor shaft to facilitate assembly. The 60-cycle, three-phase line includes 400 to 5000-w sizes in the revolving armature type, and up to 400 kw in the revolving field type. Related 50-cycle line extends to 350 kw. Single-phase, 60-cycle alternators range up to 100 kw. Made by **Kato Engineering Co.,** 1464 First Ave., Mankato, Minn.

▲ For more details circle NED-583 B8 on enclosed inquiry slip ▲

CUP POINT SET SCREWS
special type for hopper feeding

Special types of serrated or knurled cup point set screws are now being offered for use in Setko hopper feeding system. Knurled screws are obtainable in a choice of hexagon and fluted socket types. For test samples and further information, write **Set Screw & Mfg. Co.,** 130 Main St., Bartlett, Ill.

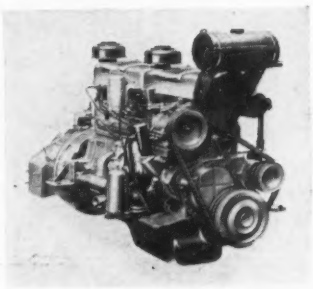
▲ For more details circle NED-584 B8 on enclosed inquiry slip ▲

HOSE CLAMP
applies tension in a perfect circle

Constant concentricity of the Corbin self-tightening hose clamp assures that the squeezing tension is applied in a perfect circle around the tubing, throughout the range of hose diameters. Clamp is a single ring of steel with built-in spring tension. It is widely used on autos, washing machines, and for pneumatic, hydraulic, and cooling lines in many types of equipment. Clamps are easily expanded with an ordinary pair of pliers. Made by **American Hardware Corp.,** Corbin Hose Clamp Div., 130 Washington St., New Britain, Conn.

▲ For more details circle NED-585 B8 on enclosed inquiry slip ▲

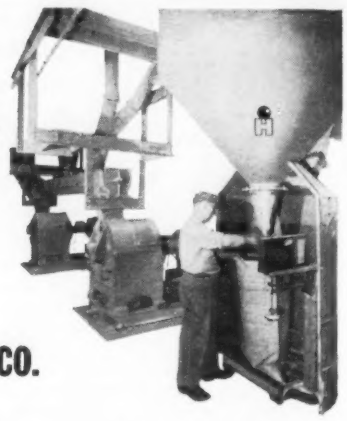
DIESEL ENGINE
has 82 to 127-hp range



Mercedes-Benz Model OM 315 diesel engine now available in the United States is a six-cylinder, four - cycle, vertical in-line, liquid-cooled engine with an 18.5 to 1 compression ratio. It is rated at 82 to 127 hp from 1200 to 1800 rpm. Weight is 1775 lb. Over-all dimensions are 55 x 31 x 46 in. It has a precombustion chamber type combustion system and Robert Bosch injection pumps and nozzles. Standard equipment includes glow plugs for fast, low temperature starting. Pistons are aluminum and cylinder block is chrome-nickel alloy cast iron. Engine is available in heat exchanger or radiator-cooled designs for marine, marine auxiliary, construction, mining, logging, oil field, and other applications. Available from **Curtiss-Wright Corp.,** Utica Div., Utica, Mich.

▲ For more details circle NED-586 B8 on enclosed inquiry slip ▲

A HOFFCO-VEYOR SYSTEM PAYS ITS WAY AT ARMOUR & CO.



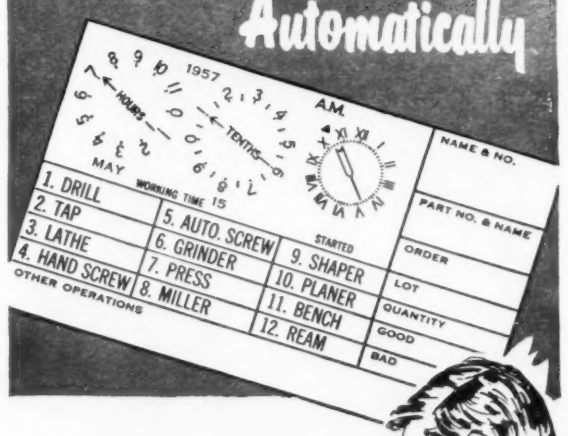
A HOFFCO-VEYOR pneumatic conveying system installation at an Armour & Co. glue plant solved their material handling problems and resulted in these money saving improvements:

- Instead of numerous units of bulky machinery, one compact Hoffman system serves the entire plant.
- Materials move in controlled quantities.
- Clean, dust-free pick-up and delivery prevents leakage into plant atmosphere.
- Working hazards are eliminated by enclosed equipment.
- Savings in labor costs pay for the equipment in a short time.

WRITE FOR BULLETIN PB 500
PNEUMATIC CONVEYING DIVISION
U.S.HOFFMAN MACHINERY CORP.
103 FOURTH AVENUE, NEW YORK 3, N. Y.

▲ For more details circle NED-587 B8 on enclosed inquiry slip ▲

Cost control begins with CALCULAGRAPH Automatically



No need to "just wish" you had accurate job cost records because with Calculagraph system you obtain these records automatically.

Calculagraph not only prints and records working time per worker per job but computes the *elapsed time* for every job card being recorded. That means, of course, that your costs are computed automatically. Also many workers may use the same Calculagraph computer.

Know the facts about your costs—do it with a Calculagraph system. Our representative can show you how.

Literature describing Calculagraph is yours for the asking. Just write to Dept. NE

Representatives in Principal Cities

CALCULAGRAPH Company
307 SUSSEX STREET, HARRISON, N. J. 533

DEPENDABLE ELAPSED TIME COMPUTERS SINCE 1892

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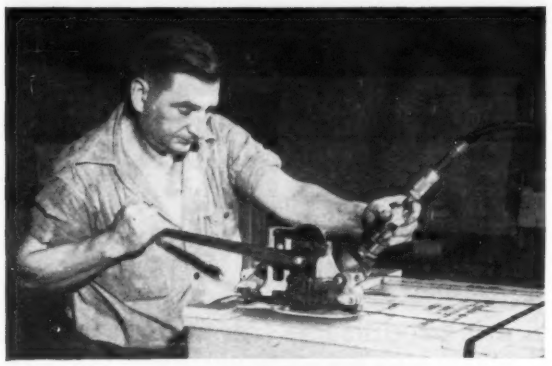


Speed strapping with Signode's air-powered strapping machine

Signode's Model AP is the only air-powered strapping machine that tensions, seals and cuts steel strapping. Pulls pre-set tension every time—up to 1600 lb. Use it on compressible and non-compressible bundles, cartons, boxes, skids and crates. With air power to do the hard work, strapping is faster and costs less. Model AP is portable, weighs only 21 lb. Automatic seal feed magazine holds 75 seals. Use of suspension hooks and overhead strap dispensers permits air-powered strapping even in crowded areas. For complete details, write:

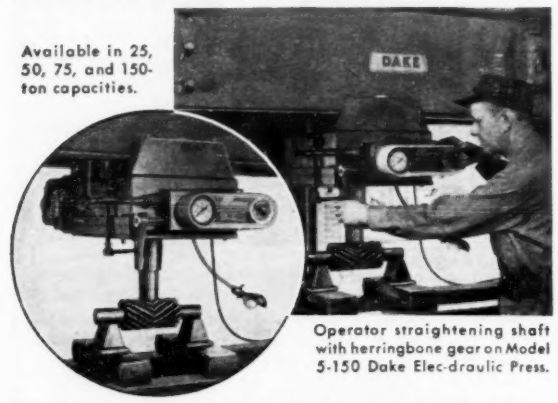
SIGNODE STEEL STRAPPING CO.
2643 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

▲ For more details circle **NED-589 B8** on enclosed inquiry slip ▲

DAKE *Elec-draulic* PRESS

OPERATES EASIER, FASTER...COSTS LESS!

Available in 25, 50, 75, and 150-ton capacities.



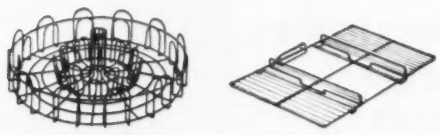
Operator straightening shaft with herringbone gear on Model 5-150 Dake Elec-draulic Press.

COMPLETELY NEW, this Dake electric-hydraulic forcing and straightening press offers operating advantages never before available in a low-cost shop press. *Rapid Ram Approach* automatically changes to power stroke when it contacts the work. *Variable Ram Speed* from zero to maximum under finger-tip control. *Movable Workhead*, self-contained—easy to center over work. Workhead can be purchased separately. *Modern Design*, all operating controls at convenient working height. Write for Bulletin 347.

DAKE PRESSES

DAKE CORPORATION
642 Seventh Street, Grand Haven, Michigan

▲ For more details circle **NED-590 B8** on enclosed inquiry slip ▲



Versatile

FORMED WIRE PRODUCTS BY *Peerless*

There's extra advantage in calling Peerless for consultation on your formed wire products problems. Peerless Design Engineers have been helping major manufacturers with recommendations, fabrication and delivery since 1910.

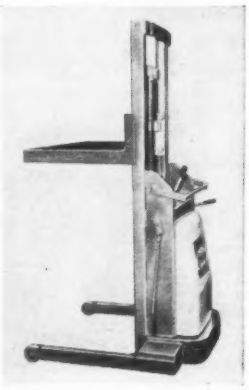
Peerless is recognized by the major manufacturers as one of the leading producers of wire goods. Complete facilities are maintained by Peerless for resistance welding at all points of contact and complete finishing services including zinc plate, zinc chromate, lacquer and poly-vinyl finishes. Peerless can help you with your design and formed wire production problems.

Write today for Peerless' new brochure on their plant facilities. We invite your immediate inquiry on your current problems.

PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET • LAFAYETTE, INDIANA

▲ For more details circle **NED-591 B8** on enclosed inquiry slip ▲

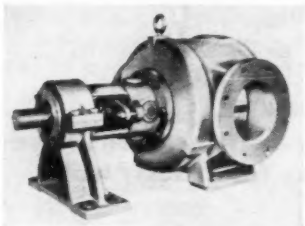
ELEVATING TRUCKS
battery powered or pedal operated



Champion series of Safeway portable elevating trucks features a 24 x 25-in. steel platform which is raised and lowered by a hydraulic lift mechanism. Battery-powered units are offered in 58, 70, 82, and 94-in. lifting heights and have a capacity of 1500 lb. Pedal-operated trucks lift to 46, 58, 70, or 82 in. and have a 1000-lb capacity. Both types have ball bearing wheels and floor brakes. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.

▲ For more details circle **NED-592 B8** on enclosed inquiry slip ▲

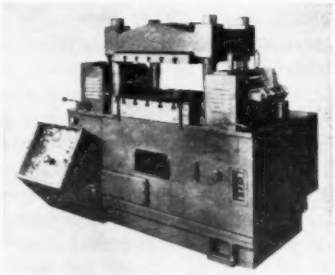
ROTARY PUMP
for viscous and thin liquids



General transfer, metering, and other services involving pressures to 100 psi are applications for this 8-in. positive displacement pump. It has a capacity up to 1200 gpm. Minimum sealing surfaces with optimum rotor and idler dimensions for any given viscosity reduce viscous drag and result in efficiencies up to 90 per cent. Direction of flow can be reversed, regardless of shaft rotation. Materials for handling a wide variety of thin and viscous liquids may be specified. Made by **Seren Machine Products Corp.**, 1804 W. Fulton St., Chicago 12, Ill.

▲ For more details circle **NED-593 B8** on enclosed inquiry slip ▲

STAMPING PRESSES
75, 100, 150, 200-ton capacities offered in high speed machines



Four - post upper platen guide in line of four two-point, back gear, under drive, stamping presses assures alignment of punch and die throughout the press stroke. The automatic, high speed machines are offered in standard 75, 100, 150, and 200-ton capacities. Capacity point loading can be handled anywhere along the center line, right-to-left and column-to-column. Presses require no pits, and their low center of gravity permits high-cycle operations with a minimum of vibration.

Antifriction bearing-mounted, pneumatic clutch and brake are a single synchronized unit. Clutch control permits inching, single stroke, continuous operation, and forward and reverse operations. Shut heights are limited only by the guide post lengths. The integral ingoing and pull-out roll feeds are equipped with intermittent and constant drag brakes. Also incorporated are scrap cutters. Made by **Alpha Press & Machine, Inc.**, Dept. 3, 9281 Freeland Ave., Detroit 28, Mich.

▲ For more details circle **NED-594 B8** on enclosed inquiry slip ▲

DRUM & BARREL TRUCK
easily moves 1000-lb loads

Drums and barrels of over 15-in. diameter and 24 to 35 in. high can be moved with this hand truck. It has large roller bearing wheels with solid rubber tires. Loads of 1000 lb are easily moved. Its chime hook is adjustable and locks in position. Truck picks up and deposits loads on floors, in tightly backed rows, or on and off of pallets up to 8 in. high. Loads are balanced over the center of gravity. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

▲ For more details circle **NED-595 B8** on enclosed inquiry slip ▲

NEW and needed

JUNIOR CYCLONE DUSKOLECTOR

by *Hammond*

Model JCS-4 is easy to install and can be mounted on casters for portability.

The NEW Hammond Junior Cyclone DusKolector provides a low-cost means of collecting dust from light and medium dust sources. It also fits in where filter dust collectors have not been satisfactory.

Built to usual Hammond standards, it has the same features as the larger Cyclone DusKolectors. Blower wheel is self-cleaning paddle type, dynamically balanced and mounted on the exhaust, not the inlet side. Bag has zipper for quick cleaning. Two sizes available, giving 400 or 600 CFM.

Where to use Cyclone DusKolectors — machine shops and tool rooms for collecting cast iron dust from mills, lathes, surface grinders, tool and cutter grinders, internal grinders, etc. Polishing and buffing departments, crating rooms, grinding departments and other dust producing sources.

Hammond DusKolectors Don't Cost, They Pay — by providing healthier working conditions, protecting costly machine tools and reducing cleaning and painting costs.

Write for Catalog

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

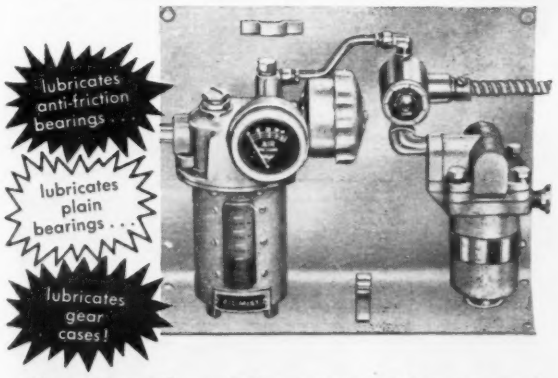
▲ For more details circle **NED-596 B8** on enclosed inquiry slip ▲

Foolproof protection for all moving parts!
ALEMITE

oil-mist

AUTOMATIC LUBRICATION

can be easily designed into any new or installed machine!



Gives You These 8 Important Advantages!

1. **Continuous lubrication.** Deposits fresh, clean film of oil on all surfaces of all bearings.
2. **Fully automatic.** Starts and stops with operation of machine switch.
3. **No guesswork.** Bearings can't be overlooked, or overlubricated.
4. **Reduction of bearing temperatures.** Acts as bearing coolant. Reduces bearing temperatures as much as 20°F.
5. **Fewer types of oil.** Reduces number of oils that must be stocked, handled and applied.
6. **Elimination of downtime.** All bearings are constantly lubricated while machines continue to operate.
7. **Extension of bearing life.** Life of grinding machine bearings have been extended from 400 to 7,000 hours!
8. **As high as 90% less oil consumption.** Usually consumes about 1/10th amount used by any other oiling method.

FREE! New Oil-Mist Catalog! Send for your copy today!

STEWART SW WARNER **ALEMITE** REG. U.S. PAT. OFF.
Division of STEWART-WARNER CORPORATION
1850 Diversey Parkway, Chicago 14, Illinois

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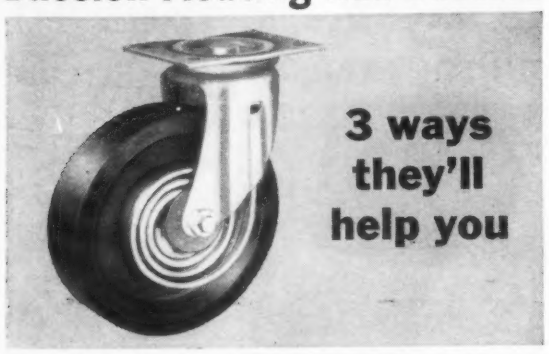
Bassick Floating Hub Casters



The exclusive shock absorbing features of Bassick Floating Hub casters fit them for three kinds of applications:

Fragile loads—liquids, breakable products, precision machinery (such as jet engines)—need Floating Hub protection.

High speeds—in tractor-pulled applications and/or over rough floors—call for Floating Hubs to absorb shocks.

Heavy duty—heavy loads and/or rough terrain. On these jobs Floating Hubs out-live ordinary casters by far.

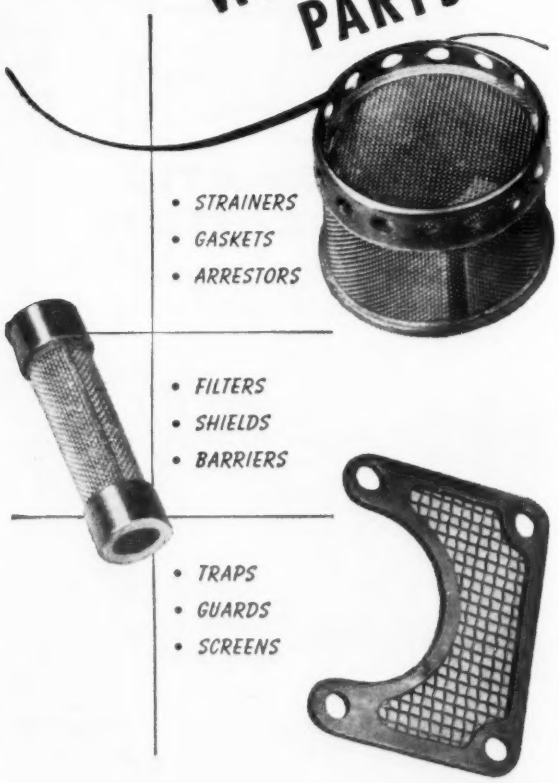
Check your local industrial distributor who stocks Bassick-casters. e.e

THE BASSICK COMPANY
BRIDGEPORT 5, CONN.
IN CANADA:
BELLEVILLE, ONT.

Bassick SYMBOL OF EXCELLENCE

For more details circle NED-598 B8 on enclosed inquiry slip

SPECIAL WIRE CLOTH PARTS



Just to name a few . . . and most of the parts we are making to special order don't really have a name! Our real specialty is fabricated wire cloth parts, made to your specifications.

Any metal, almost any size, almost any shape . . . we can probably assemble it for you . . . faster, better and at a lower cost, than you can do it yourself.

For more information, just send for our latest Fabricated Parts Catalog.

NEWARK for ACCURACY

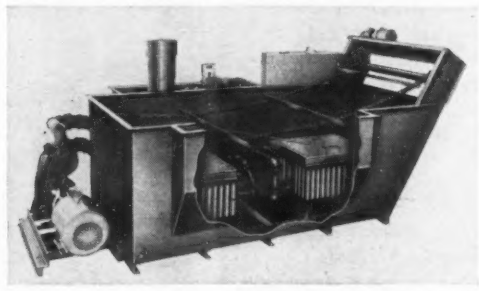
Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

For more details circle NED-599 B8 on enclosed inquiry slip

VACUUM LIQUID FILTER
operates even during cleaning cycle

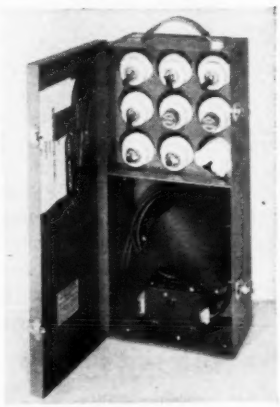
Dual-manifold Delpark Filter-Matic vacuum filter provides continuous filtration, even when being cleaned, by having the manifolds on a cycling operation in



opposition to each other. When one manifold is filtering, the other is on backwash for cleaning of the permanent filtering elements. Leaf or tubular filtering elements and nylon or wire screen filtering media are optional. Both forms of elements and media may be used with filter aid to achieve absolute filtration. Flow capacities range from 5 to 1000 gpm. Higher flows are handled by multiple units. Made by **Industrial Filtration Co.**, Dept. DM-203, Lebanon, Ind.

For more details circle NED-600 B8 on enclosed inquiry slip

FLAW INSPECTION KIT
portable spray-on fluorescent penetrant kit checks for cracks, leaks

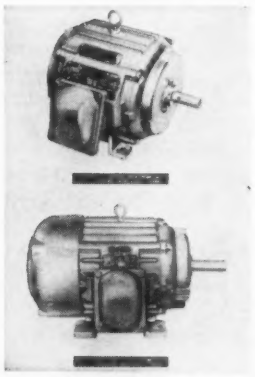


Cracks, pores, leaks, and other defects open to the surface of any solid material are readily located with products and materials contained in this Zyglo ZA-43 portable spray-on fluorescent penetrant inspection kit. Sensitive Zyglo materials are supplied in pushbutton type pressurized spray cans. These include cleaner, penetrant, and developer. Also included are a 100-w high-intensity black light, cleaning cloths, wire brush, and instructions.

When sprayed on surface of part to be tested, penetrant is drawn by capillary action into any crack or porosity. Cleaner is then used to remove penetrant from the surface. Application of a thin film of the developer draws the penetrant from the crack or pore to the surface. When black light is directed on surface, every defect shows up as a fluorescent glow. Kit is offered by **Magnaflux Corp.**, 7316 W. Lawrence Ave., Chicago 31, Ill.

For more details circle NED-601 B8 on enclosed inquiry slip

EXPLOSIONPROOF MOTORS
fan-cooled and nonventilated units operate in combustible atmospheres



Both fan-cooled and nonventilated models are offered in line of totally-enclosed explosionproof F-M motors designed for use in combustible or explosive atmospheres. The NEMA standard motors are UL-approved for operation in atmospheres containing gasoline, petroleum, naphtha, alcohol, acetone, and lacquer solvents and natural gas; explosive metal dusts such as magnesium; coal, coke or carbon black dusts; and grain dust.

In Type KZCX fan-cooled units, cooling air supplied by external aluminum fan, is directed over motor surface by special fan shield. Small openings on air intakes prevent large foreign objects from being drawn in by fan. These units are offered in $1\frac{1}{2}$ to 30-hp ratings. Type KZEX nonventilated motors, made in $1\frac{1}{2}$-hp ratings and lower, are cooled through convection and natural radiation, provided by rotor action and large frame surface area.

Conduit box can be rotated around motor periphery to any of four positions, 90 degrees apart. Provision is made for installing UL-approved automatic drain plugs. Made by **Fairbanks, Morse & Co.**, 606 S. Michigan Ave., Chicago 5, Ill.

For more details circle NED-602 B8 on enclosed inquiry slip

cut production time and costs with **INDUSTRIAL RETAINING RINGS**

Save material, eliminate costly machining and tooling, speed assembly with precision-made INDUSTRIAL Retaining Rings. They can be re-used over and over again because of their lasting resiliency and sustained circularity.

Internal, external and open types are available for immediate delivery in a wide range of sizes and finishes. Open-type rings are also available stacked for speedier assembly.

Write today for free ring samples and catalog.

IRR *Originators of modern retaining ring dispensing*

INDUSTRIAL RETAINING RING COMPANY
Dept. N2, 57 Cordier Street • Irvington 11, New Jersey

For more details circle NED-603 B8 on enclosed inquiry slip

Equipto custom designed BENCHES at assembly line prices

161 Models in stock

Equipto's complete line of modern flow Benches give you an unlimited choice of units. They can be used singly or arranged into one continuous streamlined assembly. Available with many types and styles of drawers, drawer pedestals, cabinet pedestals, sliding doors, aerial shelves, and a choice of 4 different tops.

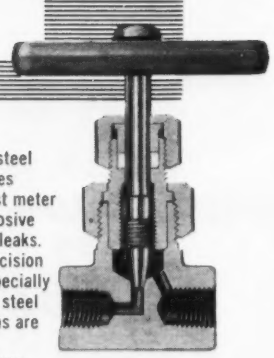
Each drawer is a vault unto itself . . . cannot be pilfered by removing drawer above. All drawers ride quietly on four trouble-free nylon rollers. Write for free catalog No. 200 illustrating and describing this outstanding line of top quality benches.

Equipto Division of Aurora Equipment Co. 690 Prairie Avenue Aurora, Illinois

Steel Shelving . . . Parts Bins . . . Drawer Units . . . Lockers . . . Carts . . . Work Benches

For more details circle NED-604 B8 on enclosed inquiry slip

AMERICAN® needle valves



Teflon-packed, forged steel American® Needle Valves stand up in the toughest meter manifold jobs and other corrosive field services without gland leaks. Stainless or carbon steel precision machined valve bodies are specially suited for welding. Stainless steel centerless-ground valve stems are designed so that the valves can be repacked under pressure.

Standard valves design rated for pressures to 5,000 psi at 70°F. For pressure to 10,000 psi, upon request, valves are hydrostatically tested and individually inspected. Valves are furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

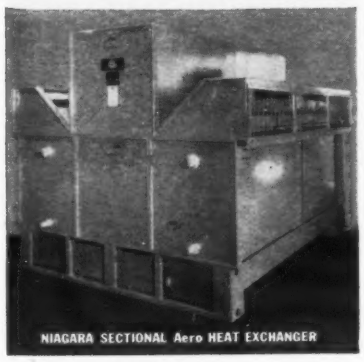
Angle or straight patterns — screwed or union bonnets.

AMERICAN METER COMPANY INCORPORATED (ESTABLISHED 1836)

Executive Offices: Philadelphia 16, Penna. Sales Offices In Principal Cities

For more details circle NED-605 B8 on enclosed inquiry slip

WATER SAVING
WITH TROUBLE-FREE COOLING EQUIPMENT



NIAGARA Aero HEAT EXCHANGER

•

Convenient Units Up To 30,000,000 BTU Capacity

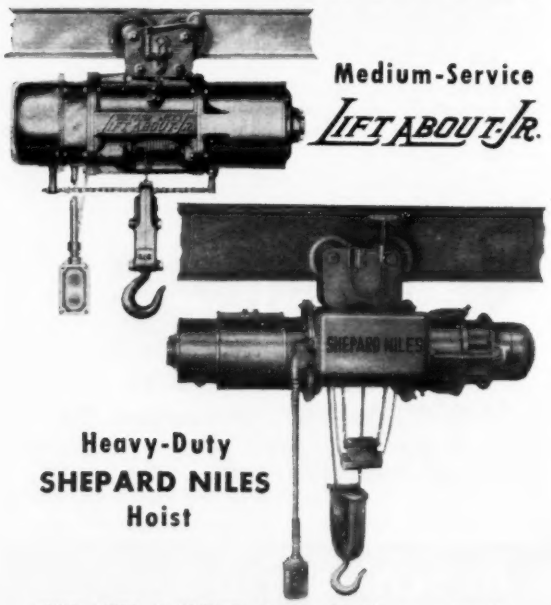
Cools your jacket water for engines or process equipment or electric apparatus. Your closed system keeps free from dirt or maintenance troubles. You can cool air, gases, chemicals, quench baths, plating baths, welding machines, extrusion and drawing machines. You get real precise temperatures, save rejections, lower production costs. Use NIAGARA AERO HEAT EXCHANGER cooling with atmospheric air . . . saves water, pumping, piping and power; quickly saves its costs. Write for Bulletin No. 132.

NIAGARA BLOWER COMPANY
Dept. ED-2, 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-606 B8 on enclosed inquiry slip ▲

SHEPARD NILES HOISTS

SAVE YOU MONEY



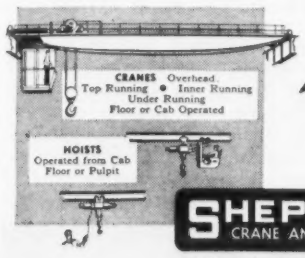
Medium-Service *LIFT ABOUT-JR.*

Heavy-Duty SHEPARD NILES Hoist

YOU GET A HOIST that will lift your loads year after year when you buy one bearing the Shepard Niles name. Long after you've written it off, your Shepard Niles Hoist will be cutting costs, speeding work in your plant.

Shepard Niles offers you electric hoists of proven quality for cycle duty, heavy intermittent duty, medium duty and light-occasional service. Choice of medium and heavy capacities with slow, medium and fast speeds.

Available with short to long lifts, standard or close headroom, manual or magnetic controls. Easily reconnectable throughout for changing voltages of alternating current. Low voltage at push button station included. Also suitable for weather-proofing and vapor proofing.



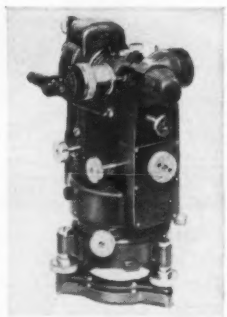
Send for Bulletin illustrating complete line of Shepard Niles Hoists. Request a representative to call

America's Most Complete Line of Cranes and Hoists Since 1903

SHEPARD NILES
CRANE AND HOIST CORPORATION
1879 Schuyler Ave., Montour Falls, N. Y.

▲ For more details circle NED-607 B8 on enclosed inquiry slip ▲

PRECISION THEODOLITE
for machine set-up and checking

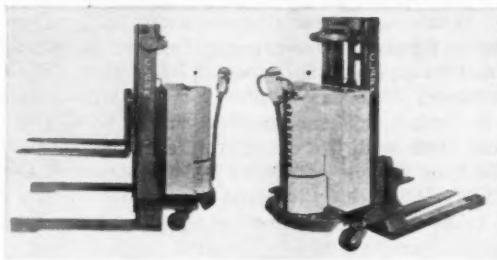


Circle-reading eyepiece of the Microptic No. 2 Mark II theodolite is placed outside the upright so that it can be revolved separately for comfortable reading, even when viewing steep angles. It is suited for aligning and setting up large structures, extrusion presses, and rolling mills, and for gear and indexing motion checking. Instrument's high-precision, bubble - controlling set-up is totally enclosed within the body of the upright to be independent of temperature change and air currents. An auto-collimating eyepiece converts the instrument for readings to 1 sec on horizontal and vertical rotation, independent of centering. Made by **Engis Equipment Co.,** Dept. RR10, 431 S. Dearborn St., Chicago 5, Ill.

▲ For more details circle NED-608 B8 on enclosed inquiry slip ▲

STRADDLE STACKING TRUCKS
2000 and 4000 lb units offered with 94 to 130-in. upright lifts

Models 20 STF and 40 STF straddle-type stacking trucks with 2000 and 4000-lb capacity, respectively, have been added to Powrworker line of battery-powered hand trucks.



Depending on which of seven sizes of uprights is specified, units can lift and tier palletized goods to heights from 94 to 130 in. Articulated drive unit, mounted on roller assembly, will traverse up and down as much as 3 in. to compensate for uneven floors.

Brakes apply when steering handle is either vertical or horizontal, and power circuit is broken automatically at the same time. Machine will travel 2.8 mph empty and 2 mph loaded. Available fork lengths are 30, 36, 42, and 48 in. Either single or double-row 12-v batteries can be used to power these units. Made by **Clark Equipment Co.,** Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

▲ For more details circle NED-609 B8 on enclosed inquiry slip ▲

DRAFTING TABLES
four-post and pedestal models adjust to any desired angle

Ease of use and long wear are characteristics of Woodmaster drafting and drawing tables. Hardwood bases are finished dark oak, and tops of soft wood are kiln dried, smoothly finished, sealed, and lacquered. Board ends are protected with zinc plated steel end cleats. Four - post drafting tables are rigidly assembled with bolts. A three-receptacle electrical outlet provides for operation of lamp, eraser, and pencil sharpener. Steel drawers have wood fronts, and they operate smoothly on steel rails and nylon glides. Wide reference drawer and tool drawer have lock. Optional two-drawer auxiliary cabinet with file and supply drawers fits perfectly to become part of unit. Interlocking steel hinge allows table top to lift off easily.

Pedestal drawing tables have selected hardwood bases finished in dark oak. Steel bracing assures rigidity. Serrated arc assures secure locking of board at any angle with turn of single handwheel. Board height is also adjustable with handwheel. Seven models have board sizes ranging from 24 x 30 to 43½ x 72 in. Made by **Stacor Equipment Co.,** 295 Emmet St., Newark 5, N. J.

▲ For more details circle NED-610 B8 on enclosed inquiry slip ▲

Extra Powerful 3/8" Drill-
just $39.95

New Porter-Cable Drill Features:
Big Drill Performance — Big Chuck Capacity!

Never before a drill with so much power and capacity at this low price!

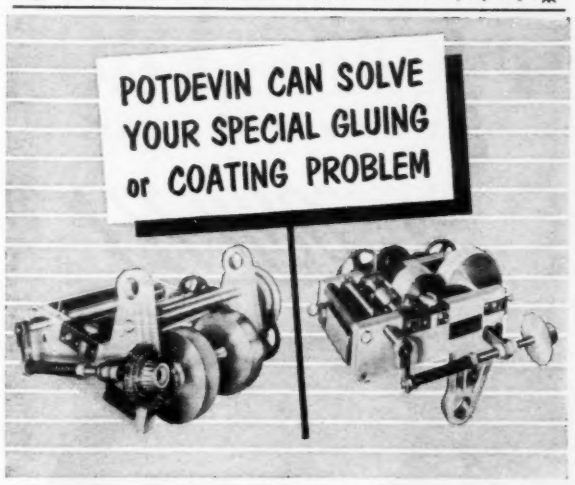
The new Model 149 is specially designed to do drilling jobs not possible with standard ¼" drills. It features a heavy-duty Universal motor, extra large precision ground gear chuck, man-sized pistol grip, ball bearings and much more. See and try the new Model 149 drill at your dealer's soon. Write for full information.

PORTER-CABLE Machine Company
8122 Marcellus Street
Syracuse 8, New York

Porter-Cable *Quality Power Tools*

saws • drills • sanders • routers • shapers • planes
In Canada: Porter-Cable Ltd., Box 5019, London, Ont. Canadian prices slightly higher.

▲ For more details circle NED-611 B8 on enclosed inquiry slip ▲



Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

Illustrated is a topside or underside coating machine for applying resins, varnish, glues, lacquer, etc. to webs or sheets of paper up to 21"

If your problem is high speed coating of paint, varnish, glue, latex, etc. —POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency.

ESTABLISHED IN 1893 POTDEVIN®
POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling

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. . . that's AERO-SEAL . . . the precision worm gear clamp with a thousand industrial shop and maintenance uses. AERO-SEAL is self-locking, tight-sealing, easy to install in seconds—and AERO-SEAL stays put. Compare the STRENGTH of the worm gear. Note the band of corrosion resistant 302-18-8 stainless steel . . . AERO-SEAL won't pinch or damage hose because it exerts uniform pressure at every point. Reusable over and over and available in a wide range of sizes. Insist on the leader . . . genuine AERO-SEAL.

For added quick-attach advantage:

BREEZE *Aero-Seal* REGULAR WORM GEAR HOSE CLAMPS

BREEZE CORPORATIONS INC., 700 LIBERTY AVENUE, UNION, NEW JERSEY

▲ For more details circle NED-613 B8 on enclosed inquiry slip ▲

For Faster, Better Soldering

Use Rubyfluid

RUBYFLUID'S better soldering flux—liquid or paste—assures you of strong, neat unions, quickly and easily. RUBYFLUID'S fast acting formula wets out freely . . . is free from objectionable and harmful fumes . . . is economical to use.
For stainless steel soldering, use RUBY'S Special Stainless Steel flux . . . designed specifically for this application . . . requires no extra heat, no extra equipment, will not corrode or discolor metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle **NED-614 B8** on enclosed inquiry slip ▲

PROPELLAIR®
it moves the air...

"QUIETLY"

...whisper-quiet performance

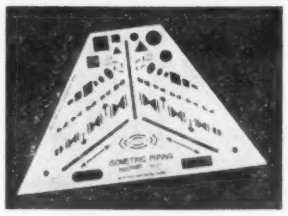
Where noise adds to costly confusion you are wise to install whisper-quiet Propellair Type "QD" fans. The efficient air foil design of the rigid, precision balanced, cast aluminum propeller eliminates vibration noise and the sounding board effect of ordinary thin sheet metal blades. The special blade pitch delivers high volumes of air at quieter, lower speeds. Noise is further reduced by Propellair's steel venturi entrance ring. Powered by dependable, totally-enclosed Robbins & Myers motors, they are available in sizes from 12" to 36". Air delivery capacities from 1235 to 12000 CFM.

WRITE FOR BULLETIN NO. 695-N

R&M **PROPELLAIR®**
DIV. OF ROBBINS AND MYERS, INC.
SPRINGFIELD, OHIO
Certified Ratings PFMA

MOVING AIR IS OUR BUSINESS
▲ For more details circle **NED-615 B8** on enclosed inquiry slip ▲

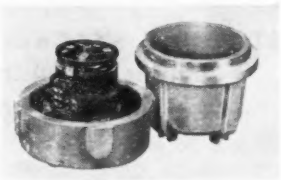
PIPING TEMPLATE
simplifies drawing components



Valves, flanges, elbows, reducers, caps, and pumps are piping system components depicted by symbols on No. 43 isometric piping template. It is designed for isometric piping layout drawings such as encountererd in refineries, gas and water distribution systems, and sprinkler systems. Template can be tilted three ways for rapid and accurate drawing in three planes of perspective view. The 8½ x 5¼-in. drawing aid is made of 0.030-in. mathematical quality plastic. Price is $3.75. Made by **Rapidesign, Inc.**, Box 429A, Burbank, Calif.

▲ For more details circle **NED-616 B8** on enclosed inquiry slip ▲

VARIABLE AUTOTRANSFORMERS
designed for panel mounting



Lightweight cast aluminum housings and compact construction are featured by three explosionproof variable Autoformers available for controlling power line voltage in hazardous areas. Units are designed for panel mounting. Model 6240 shown has 120-w 60-cycle input and output of 0-140 v, 7.5 amp, 1.0 kva maximum. The 29-lb unit is normally supplied with Type 116 Powerstat. Medium size Model 7001 has 0-135-v 3-amp output, weighs 19 lb, and has Type 20 Powerstat. Small, 8½-lb Model 7009 with Type 10 Powerstat has output of 0-132 v, 1/25 amp. Made by **I-L-S Instrument Corp.**, 4553 W. 160th St., Cleveland 11, Ohio.

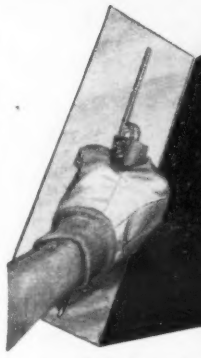
▲ For more details circle **NED-617 B8** on enclosed inquiry slip ▲

TANK CLEANER
high capacity unit is water driven

Up to 9400 gph of water is discharged through the two revolving jets of the high capacity, water - driven Jumbo tank cleaner. Each jet of the automatic unit has an effective cleaning range of 50 ft. It uses plant pumps and lines to drive the jets in a spherical pattern, scrubbing the entire inner surface of large tanks with cold water or hot water up to 176° F. Oil-lubricated device requires only 114 psi for efficient operation. Made by **Sellers Injector Corp.**, 1602Z Hamilton St., Philadelphia 30, Pa.

▲ For more details circle **NED-618 B8** on enclosed inquiry slip ▲

COROCRETE...



A CORROSION-PROOF **FLOOR SURFACING** THAT PROVIDES GREATER PROTECTION AGAINST ACIDS AND ALKALIES

7820-CC

Quickly and easily applied, COROCRETE offers the greatest floor surfacing protection available today. Corocrete is 4 times stronger than concrete . . . is resistant to impact and abrasion . . . sets up faster . . . and is guaranteed protection against acids, alkalies and solvents. COROCRETE is recommended in chemical and food processing, plating and metal working industries.

COROCRETE is an exclusive development of CEILCOTE . . . a name long recognized as leader in the corrosion industry. Write today for catalog!

COROCRETE CEILCOTE
another product of
THE CEILCOTE COMPANY, INC.
4838 Ridge Road • Cleveland 9, Ohio

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"TRANSPORTATION" BULLETIN

Tells you and shows you how you can move mountains . . . of dry, pulverized, crushed and granular materials to and from, up, over, around, and under your plant to storage; from storage to processing points.

It's called Fuller Equipment for the Process Industries. Write for Bulletin G-3.

Fuller
. . . pioneers in harnessing AIR

FULLER COMPANY G-130 3433
154 Bridge St., Catasauqua, Pa.
SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Chicago • San Francisco • Los Angeles • Seattle • Kansas City • Birmingham

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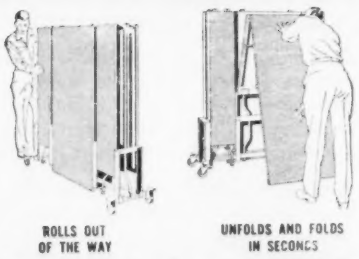
Here's the answer to lunch period seating—Right in the department!



TRANSI-FOLD
FOLDING TABLES AND BENCHES

These rugged, husky, compact units are in broad industrial use and proved practical in large and small plants. They store against the wall in minimum space in the department and set up in seconds in aisleways. Because of travel time, congestion and other complications central cafeterias are being abandoned in favor of mobile or area food service but fixed tables take up too much room. They are invariably used as storage surfaces, are unsanitary and never ready for use.

These folding tables and benches enable you to provide respectable seating and gain many economies in time and space. Understructures are welded steel. Warp-proof tops are 7-ply Ph. mahogany, surfaced with high-pressure laminated washable plastic with formed steel reinforcing bars. Edges are trimmed with permanently attached stainless steel. Write for folder.

SCHIEBER SALES COMPANY • DETROIT 39, MICHIGAN

▲ For more details circle **NED-619 B8** on enclosed inquiry slip ▲

What's your need for heat?

Whatever your heating job, you'll find the efficient, economical answer in

CHROMALOX Electric Heaters

. . . for heating platens, dies, molds, metal parts . . . for heating liquids, air, gases . . . for curing, drying, baking . . . for comfort heating in offices and factories . . . for special applications . . . in fact for any application requiring fast, low-cost, controlled heat up to 1100°F.

IMMEDIATE DELIVERY
from the world's largest factory stock of industrial electric heaters . . . over 15,000 types, sizes and ratings.

Let the Chromalox Sales-Engineering staff solve your heating problems . . . electrically.

Write for your copy of Catalog 50
Contains helpful information on design, uses, and prices of Chromalox Electric heaters, elements, thermostats, contactors and switches.

To get some interesting facts about additional applications of electric heat, ask for Booklet F1550—"101 Ways to Apply Electric Heat." See ad on page 4

Edwin L. Wiegand Company

A-4458 7509 Thomas Boulevard, Pittsburgh 8, Pennsylvania

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VINYLITE MASK GOGGLE

Another example of American Optical-engineered product development — this improved lightweight, flexible mask goggle offers optically correct protection against flying particles. Provides wider field of vision. Lens is interchangeable, one-piece acetate. Your nearest AO Safety Products Representative can supply you.

- Larger face mask — greater protected area.
- Deeper cup — increased lateral protection — easily fits over all safety ℞ and personal glasses.
- Modified nosepiece — aids comfort, facial fit.

Always insist on the ® Trademark on Lenses and Frames

American Optical COMPANY SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS BRANCHES IN PRINCIPAL CITIES

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BEVERLY *Pneumatic* THROATLESS SHEAR

CAPACITY 3/16 MILD STEEL 10 GA. STAINLESS

FASTER, EASIER CUTTING *to any Shape!*

- Compactly built for maximum visibility and efficiency
- Operates on 35 to 150 PSI air pressure
- Adjustable power and return stroke length and speed

Beverly Pneumatic Shears combine all the advantages of Beverly Throatless Shears with fast, effortless cutting action through air cylinder operation. Air operation speeds work, permits accurate cutting to a pattern or template, as operator can concentrate on guiding work through the shear. Flow control valves permit precise adjustment of stroke speed; adjustable actuating arm controls stroke length. Foot Switch permits operator to use both hands on the work piece. Operates on 110V. 60 cycles AC and 35 to 150 PSI air pressure.

See your nearby Beverly Distributor
Write for catalog sheet and complete details.

BEVERLY SHEAR MANUFACTURING CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

▲ For more details circle NED-624 B8 on enclosed inquiry slip ▲

DRUM HANDLER
used with fork truck, hoist, crane

Open and closed drums, barrels, fiber containers, and boxes can be lifted, tilted, or rotated readily with this Grizzly Roto-Tilt attachment for fork trucks, hoists, or cranes. It permits controlled pouring of liquid or granular materials. Lifting trolley is equipped with ball bearings enclosed in channel. Safety locking bracket secures upper jaws to upper rim of container, and serrated jaws and channel with recessed drum bottom foot plate insures positive locking hold. Three models are available for 15 to 55-gallon drums. Made by **Pucel Enterprises, Inc.**, 3746-A Kelley Ave., Cleveland 14, Ohio.

▲ For more details circle NED-625 B8 on enclosed inquiry slip ▲

TIME DELAY RELAY
with 0 to 5 min delays

Transistorized circuit of this electronic time delay relay allows subminiature size, light weight and maximum reliability. Unit has 0-5 min range on both make and break, temperature range from −65 to 165° F, and accuracy within ±10 per cent. It meets all applicable military specifications and can be used for both ground and airborne applications. Various mountings and terminal arrangements are available. Made by **Pendar, Inc.**, 2664 S. La Cienega Blvd., Los Angeles 34, Calif.

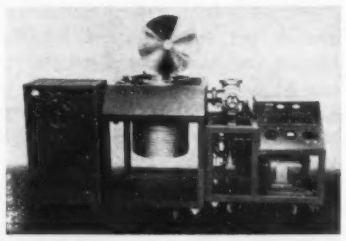
▲ For more details circle NED-626 B8 on enclosed inquiry slip ▲

ADJUSTABLE STORAGE RACK
has versatile boltless assembly

Boltless assembly and adjustability are advantages embodied in the Adjust-A-Rak, latest addition to the Rak-A-Tier line of industrial storage racks. Horizontal members or stringers have double-locking welded end plates with notched projections which lock into inverted teardrop holes in the upright columns. Once stringer is dropped into place, end plate is wedged by gravity and load against hat section of column, establishing strong, dependable moment connections. Need for diagonal sway braces is eliminated. Drop-in accessories include skid supports, drum supports, and various types of decking. Made by **Arteo Corp.**, Dept. D, Hatfield, Pa.

▲ For more details circle NED-627 B8 on enclosed inquiry slip ▲

VACUUM FURNACE
achieves temperature of 2000° C, converts to high vacuum evaporator

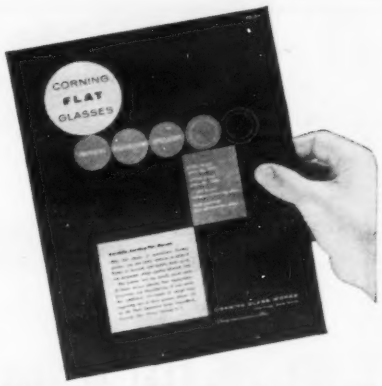


Melting, casting, annealing, alloying, sintering, heat treating, and crystal growing are vacuum and inert gas operations that can be performed in F-15 laboratory vacuum furnace. Built on the modular principle, it can be quickly converted to a high vacuum evaporator by attaching a base plate assembly and an 18 x 30 in. bell jar to the pumping unit.

Standard furnace consists of water cooled 18 x 24-in. furnace chamber; Kinney portable PW-400 packaged high vacuum pumping system consists of fractionating diffusion pump, Kinney mechanical vacuum pump, and a cold trap; resistance or induction heating power supply; and heating element assemblies required for operations involved. Temperatures in excess of 2000° C can be achieved.

Crucible capacity is 5 lb of steel or equivalent in other metals. Furnace can reach a pressure of 1 x 10^{-4} mm Hg in 20 min or ultimate pressure of 1 x 10^{-5} mm Hg. Made by **New York Air Brake Co.**, Kinney Mfg. Div., 3529 Washington St., Boston 30, Mass.

▲ For more details circle NED-628 B8 on enclosed inquiry slip ▲



Here's the full story on . . .

Corning's Chemically Resistant* Plate and Flat Glasses

(*They're Heat-Resistant, too.)

A brand new bulletin, PE-34, "Corning Flat Glasses" gives you properties, specifications and applications.

This valuable addition to your reference file contains data on four different glasses—PYREX brand No. 7740, VYCOR brand No. 7900, a special coated infrared reflecting type, and heat-resistant blue observation.

This bulletin shows you where and how to use each kind, how to match type to task, what shapes and sizes are available.

That's Bulletin PE-34. We'll be glad to send you a free copy.

CORNING GLASS WORKS
56-2 Crystal Street, Corning, N. Y.
Corning means research in Glass

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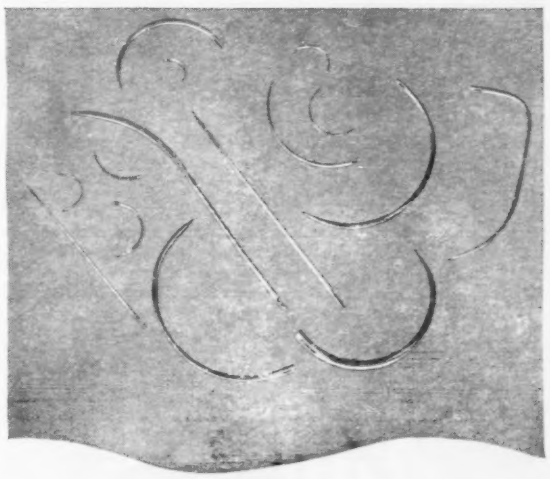

stainless wire products

of Types 410, 420, 430, 440-A, 440-B, 440-C give you extra fabrication ease when you use WEBB.

WEBB WIRE

Division of The CARPENTER STEEL CO.
New Brunswick, N. J.

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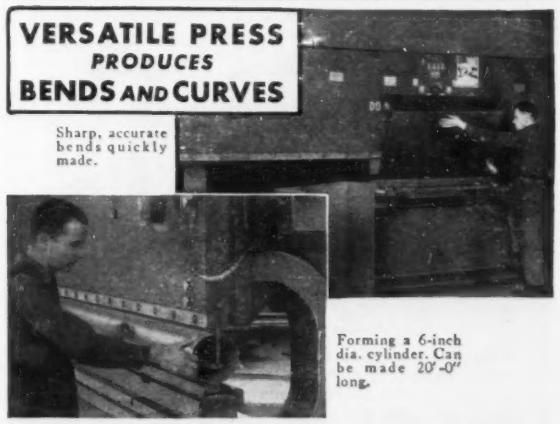
VERSATILE PRESS PRODUCES BENDS AND CURVES



Sharp, accurate bends quickly made.

Forming a 6-inch dia. cylinder. Can be made 20'-0" long.

For plants working with metal plate a Steelweld Press is about the most useful all-around tool you can imagine. It will do a wide variety of work—bending, forming, drawing, punching, etc.—with simple, easily set dies, usually at a big saving. Built for working metal of 12 gauge to one inch and for lengths to 20'-0".

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6636 East 281st St. Wickliffe, Ohio

STEELWELD PRESSES

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FOR THE BEST in Hand Holds
...hold out for SESSIONS!

And when you need a hand with any Box & Crate Hardware, as well as Armed Forces Hardware, Stampings or Stamped Assemblies see

J. H. SESSIONS & SON

Write for literature or quotations.
J. H. SESSIONS & SON
289 Riverside Ave.
Bristol, Conn.

FORMING • ASSEMBLING • FINISHING

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"...and I thought I knew all about lathes!"

SAID THE PRODUCTION ENGINEER

"What I didn't know was that only one company—Logan Engineering—makes a 14" lathe that requires no manual belt shifting whatever—no disassembling of any portion of the lathe headstock in order to replace belts—no production slow-down!

"Frankly, it stopped me when I saw how effortlessly this fine 14" Logan, with its variable speed drive, adjusts for rapid variations in spindle speed while the work turns... But it didn't stop the Logan! From 38 to 1200 rpm, it went right on running with maximum machining efficiency and production flexibility!"

Lathes from 9" swing and 17" between centers to 14" swing and 40" between centers. Also 8" shapers.

NOTE: The above features are standard equipment, too, in Logan 12" screw cutting and turret models (variable speed range, 38 to 1400 rpm).

LOGAN 14" Swing Lathe

LOOK AT A Logan BEFORE YOU LEAP

Catalog on request. Phone your Logan dealer or drop a line to—

LOGAN ENGINEERING CO.
Dept. Q-258, 4901 Lawrence Avenue, Chicago 30, Ill.

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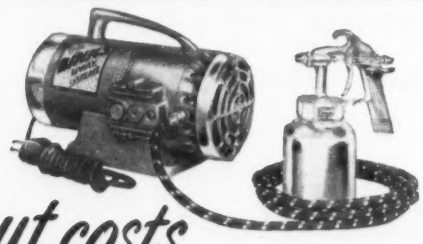

cut costs
with Binks' NEW CP portable spray outfit...

A complete, portable spray painting outfit for the professional. Compact...powerful...rugged...yet complete outfit weighs only 45 lbs. Plugs into any standard 110-115 volt a.c. outlet. Wide selection of spray guns available. Ideal for shop maintenance, touch-up work, finishing small parts, dusting, and other on-the-spot jobs. Pulsation chamber smooths out air flow. Deep-finned aluminum cylinder head and new automotive-type cooling fan assure cool operation. No oil is used in this compressor...therefore oil is never present in the air line. Years of trouble-free service.

Send for Bulletin P. C.
Describes CP units and Binks' two new portable spray painting outfits. For your free copy, write to the address below:

Binks
EVERYTHING FOR SPRAY PAINTING

Binks Mfg. Co.
3122-34 W. Carroll Ave.
Chicago 12, Ill.

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

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TAPER ATTACHMENT
fits all types of bench lathes

Any type of bench lathe can be equipped to perform internal or external taper turning, boring, and threading with the Master Taper attachment. Attached or detached in a few minutes, its original installation requires drilling only two holes on the carriage. Installation does not interfere with straight-line turning. Tapers up to 4 in. per foot or 20 degrees in either direction are possible for a maximum of 12 in. longitudinally. Swivel bar with V-ways is graduated in degrees at one end and inches at the other. Standard models range in price from $45.00 to $49.50, depending on lathe type and work capacity. Heavy duty model for larger lathes is priced from $125.00 to $149.50. Made by **General Sales & Engineering Co.**, Dept. NDC, 4525 N. Clark St., Chicago 26, Ill.

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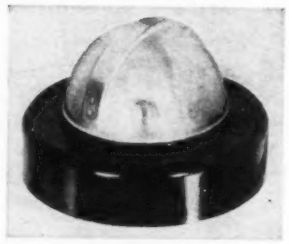
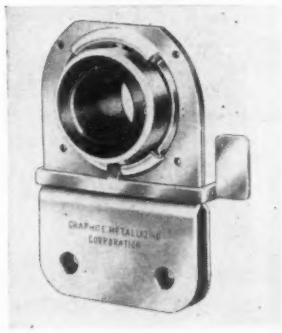
FIRE DETECTORS
three types are all self-resetting



Three types of detection elements allow this Fyrindex unit to detect fire by rate of temperature rise, fixed temperature, or a combination of both methods. These spot-type elements can be combined with other components to create a complete fire alarm system which will close doors or windows, shut off machinery, or trigger alarms. Units are self-resetting, are unaffected by dust and corrosion, and can be painted without impairing efficiency. Elements respectively provide 225, 900, and 2500 sq ft of coverage and are installed on 15, 30, and 50-ft centers. They draw either 0.3 or 1 amp, depending on operating voltage. Housing measures 3⅝ in. in diameter by 2 5/32 in. deep and mounts on flat surfaces or on 3¼-in. outlet boxes. Made by **J. H. Scharff, Inc.**, Dept. P 24, 6122 Binney, Omaha, Nebr.

▲ For more details circle NED-636 B8 on enclosed inquiry slip ▲

HANGER BEARING ASSEMBLIES
for industrial conveyor rolls



Wide selection of models for various types of mountings is offered in line of hanger bearing assemblies for industrial conveyor rolls. Quick-release feature facilitates reversing of the Graph-alloy bushing. Actually a dry lubricant in itself, the bushing retains its properties over a range from −450 to 750° F. Bushings do not attract dirt or lint, freeing them from abrasive action. They cannot contaminate food or pharmaceuticals, and can be used in water, gasoline, acids, dyes, and other fluids without changing dimension. Made by **Graphite Metallizing Corp.**, Dept. N, 1050 Hepperhan Ave., Yonkers, N. Y.

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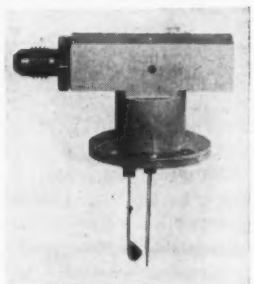
PNEUMATIC TEMPERATURE PICKUP
for control of liquids and gases



High speed response and low pressure drop are features of this pneumatic-temperature pickup for control of liquids and gases. It is available for bleeding a pneumatic control pressure on either increasing or decreasing temperature, and can operate over a range of −100 to 500° F. Thinness of bimetal elements minimizes pressure drop in ducts, and short elements are available for small ducts. Temperature can be controlled to within 1° F. Made by **Dynamic Controls Corp.**, Dept. N, 14 Runde Lane, Bloomfield, Conn.

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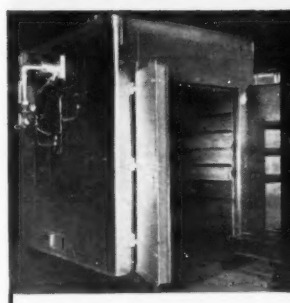
NOW! A TRULY VERSATILE STANDARD KILN TYPE OVEN



FOR
• BAKING
• HEATING
• DRYING
• CURING

MOCO has incorporated many custom, money-saving features into this standard oven — using gas fuels or electricity.

They offer *maximum temperature uniformity* and *complete safety equipment* at amazingly low initial cost. You can depend fully on a MOCO-engineered product!

MORE INFORMATION?
If you are in the market for a standard oven, be sure and send for this informative brochure.

MOCO

MICHIGAN OVEN COMPANY
419 Brainard, Detroit 1, Mich.

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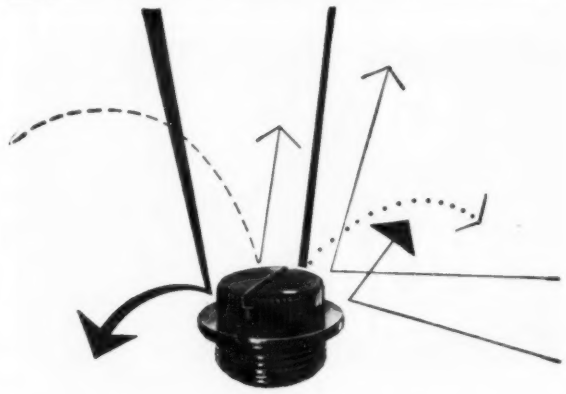
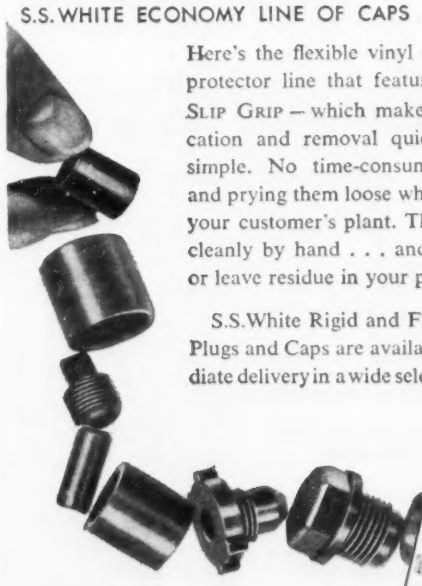


Best Impact Strength!

S.S.WHITE CAPS AND PLUGS

Sturdy . . . rugged . . . S.S.White rigid acetate plugs and caps give you reliable quality protection and guarantee factory-perfect delivery of your product. Not a chance of damaged threads, dirt, moisture or leakage due to rough handling during shipments. S.S.White caps and plugs are good-looking . . . will not jar loose or pop out . . . are easy to apply . . . are extremely easy to remove . . . and are safe for personnel to handle.

...AND FOR LOWEST COST PROTECTION...THE S.S.WHITE ECONOMY LINE OF CAPS AND PLUGS



Here's the flexible vinyl cap and plug protector line that features the NON-SLIP GRIP — which makes their application and removal quick, easy and simple. No time-consuming gouging and prying them loose when they reach your customer's plant. They come out cleanly by hand . . . and won't shred or leave residue in your part.

S.S.White Rigid and Flexible Plastic Plugs and Caps are available for immediate delivery in a wide selection of sizes.

WRITE FOR FREE BULLETIN and SAMPLES. Bulletin No. 57 sent on request. For samples, specify desired sizes and type.

S.S.White PLASTICS DIVISION
10 East 40th Street, New York 16, New York (7P)
Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

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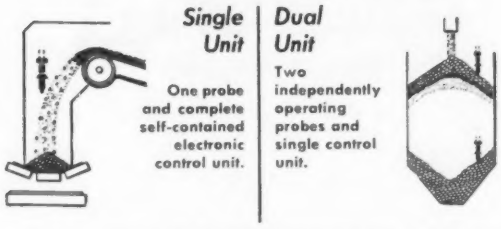
ROBINTRONIC
AUTOMATIC LEVEL INDICATOR FOR BULK MATERIALS HANDLING



This accurate, easily installed electronic unit actuates an audible or visible signal to warn operators when materials vary from the pre-set level. When equipped with a power relay, it can also control the flow of materials by stopping and starting motors and other equipment.

RoBINtronic requires neither adjustment nor lubrication. It is engineered for heavy industrial service and functions with materials of all densities from rock and coal to grain and sand.

Send for free Bulletin 166, Department R, Hewitt-Robins, Stamford, Connecticut.

HEWITT-ROBINS

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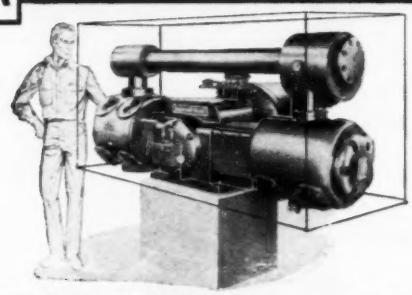
AIR COMPRESSORS



PACKAGED DESIGN makes Ingersoll-Rand PHE heavy-duty compressor easy to install, maintain and relocate. Shipped fully assembled and ready to run, units require only a minimum of piping connections, foundation and floor space. Opposed-cylinder, balanced design makes them particularly well suited wherever floor or ground conditions require a well-balanced machine.

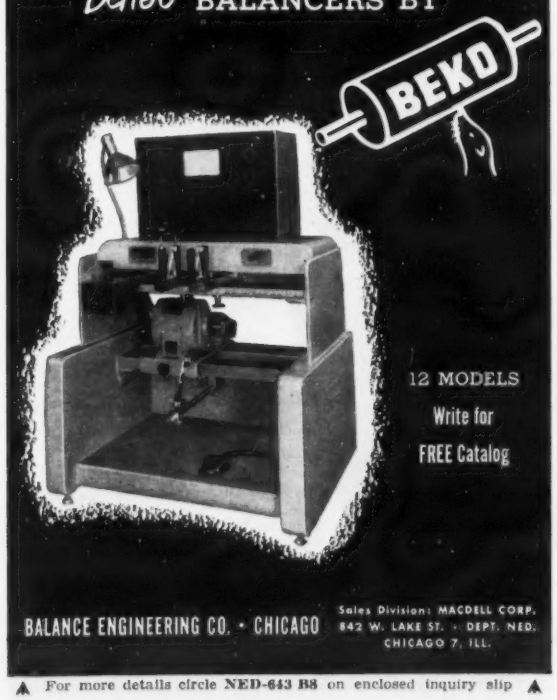
Newly designed cylinders and the latest I-R Channel Valves make this an efficent and dependable compressor on any service. Available single or multi-stage, 75 and 100 hp. For a full description, send for a copy of Form 3155.

Ingersoll-Rand Dept. PP
1-602 11 Broadway, New York 4, N.Y.

OVER 1000 COMPRESSOR TYPES & SIZES...FROM 1/4 TO 6000 HORSEPOWER

▲ For more details circle NED-642 B8 on enclosed inquiry slip ▲

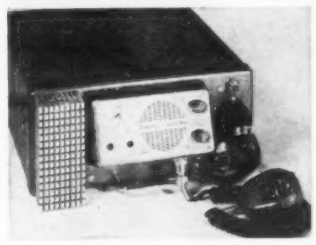
Best PRODUCTION STANDARDS with Better BALANCERS BY



BALANCE ENGINEERING CO. • CHICAGO
Sales Division: MACDELL CORP. 842 W. LAKE ST. • DEPT. NED. CHICAGO 7, ILL.

▲ For more details circle NED-643 B8 on enclosed inquiry slip ▲

MOBILE RADIO EQUIPMENT
60-w transistorized unit offered



Featured in a line of transistorized mobile radio equipment is this 60-w mobile unit. The transistorized power supplies are associated with both transmitter and receiver. Units can be used with either positive or negative ground 12-v dc systems. Mounted externally on front of the mobile combination is a grille-like "heat sink" for fast heat dissipation to protect transistors. Available all together are 60 or 30-w transistor-powered mobile radios in the 25-54 mc band, 25 or 50-w units in the 144-174 mc band, and 15-w units in the 450-470 mc band. Transistors reduce out-of-service time as well as electrical noises. Made by **General Electric Co.**, Communication Products Dept., Electronics Park, Box 1122, Syracuse 1, N. Y.

▲ For more details circle NED-644 B8 on enclosed inquiry slip ▲

PARTS FEEDER
handles up to 6000 units per minute

Tablets, pills, bottle caps, bearing components, candies, marbles, and a variety of other small items and parts are oriented, fed, and counted at speeds up to 6000 per minute by this Disc-O-Matic feeder. Unit shown handles 3/8-in. diameter rolls of cotton 2 in. long. It employs a flat rotating disc and centrifugal action to discharge parts. Variable speed drive governs disc speed. Discharge track can be horizontal or curved into the vertical to feed into assembly machines. It can be used for straight counting or batching, as well. Made by **U. S. Engineering Co.**, Dept. NED, 40-24 22nd St., Long Island City 1, N. Y.

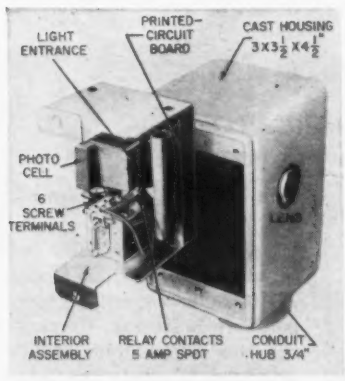
▲ For more details circle NED-645 B8 on enclosed inquiry slip ▲

HOLE TELESCOPE
inspects small holes and cavities

Sides of cavities and holes from 0.125-in. up in dies, machinery, and other products can be inspected with a 1/8-in. diameter mirror available for this five-power hole inspection telescope. A lens bulb directs a concentrated beam of light into the hole. Side-viewing adapters with diameters of 0.123 to 0.500 in. are available. Another inspection device has 47 tiny lenses inside a flexible tube and a control wheel that moves the end of the tube around corners to view remote areas of a cavity. Made by **Eder Instrument Co.**, Dept. 137, 2293 Clybourn Ave., Chicago 14, Ill.

▲ For more details circle NED-646 B8 on enclosed inquiry slip ▲

PHOTORELAY
operates on 10 ft-c of light



Conventional one-gang type conduit box accommodates this printed circuit photorelay. The printed circuit board is held in a sheet steel cradle which fits in the box as any switch would fit. The board contains all of the parts on one side and the etched wiring on the reverse side. Unit requires no warm-up and operates from 100-130 v, 50/60 cycles. Control is by 10 ft-c of light into the lens. Unit withstands weather, dirt, vibration, shock, and temperature, humidity, and voltage fluctuations. Made by **Photobell Co.**, Dept. A, 43 Vesey St., New York 7, N. Y.

▲ For more details circle NED-647 B8 on enclosed inquiry slip ▲

DEGREASER! machinery shampoo

SPRAY OR BRUSH ON . . .

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off. Launders engines, lathes, machinery, faster, more completely than steam cleaning. Self scouring action brings out factory new appearance . . . provides accurate visual inspection. Where work will not withstand the use of water for rinsing, we can recommend suitable GUNK© replacement. (GUNK is also an excellent paint brush cleaner.) Shipped in concentrated form . . . 55 gal. drum makes 580 gals. heavy-duty Degreaser! Genuine GUNK is sold in bulk sizes at better industrial wholesalers everywhere!

THE CURRAN CORPORATION
(Home Office) South Canal St. LAWRENCE, MASSACHUSETTS ← Plants → GUNK Chicago Company Chicago 38 (Licensee)
IMMEDIATE SHIPMENT — 1 PINT OR A TANK CAR

▲ For more details circle NED-648 B8 on enclosed inquiry slip ▲

Take any portable drill ...add a SUPREME

Push-Pull Tapper®

Tap in all materials—fast, safely, accurately—with minimum breakage

The Supreme PUSH-PULL TAPPER is an instant-reversing speed reduction unit made expressly for tapping. The prize-winning Push-Pull attaches easily to either the spindle or chuck of any drill. Speed reduction of 7:1 gives adequate power to tap in all materials... instant-reversing means that tap direction can be reversed without stopping drill. Tap can be moved into and out of the hole at will.

With the Push-Pull tap breakage is minimum. Finger-tip control gives operator a better "feel" for break-causing strains. Complete PUSH-PULL TAPPER Kit, No. 9000, costs just $29.95; includes everything but taps. Write for literature.

SUPREME PRODUCTS CORPORATION
2222 S. Calumet Avenue, Chicago 16, Illinois
A DIVISION OF A•S•R PRODUCTS CORPORATION

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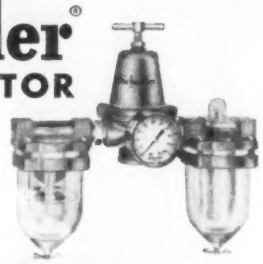
SEND FOR COMPLETE SPECIFICATIONS AND LITERATURE

NEW
Schrader®
LUB-AIR-ATOR



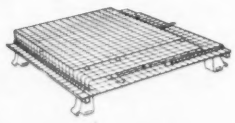
filter . . .
regulate . . .
lubricate . . .
lengthen life of equipment

Now one installation does all three: filters air, regulates pressure, lubricates exactly. No moving parts. Can be serviced without disturbing pipe connections. Compact. A true preventive maintenance device to protect each of your air circuits. One of the three sections, individually or in combination, can be used. In designing with air start each hook-up with a Schrader Lub-air-ator – keep valuable equipment running more efficiently. Specification literature available on request.

A. SCHRADER'S SON
Division of
Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue
Brooklyn 38, N. Y.

▲ For more details circle NED-658 B8 on enclosed inquiry slip ▲

what's your..?
CARRYING CHARGE

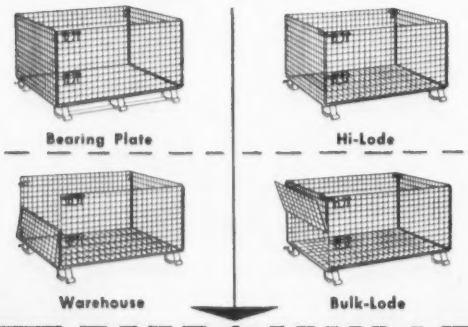


6,000 pound unit loads are efficiently and economically handled in USP Palletainers—and, empty Palletainers can be "flat-folded" for space savings and lower return rates.

What's it costing you to handle materials to and from production or assembly lines, in and out of storage, truck loading and transporting? There is an *easy way* . . . a practical, economical way with versatile USP Palletainers.

Palletainers have simplified materials handling for thousands of plants in scores of industries. And, these practically indestructible containers can save you valuable time and money both in and out of your plant. Whether you're processing, storing or distance-hauling, Palletainers provide the practical answer. Available in four basic types and a broad range of practical standardized sizes. They're engineered for safer handling, ceiling high stacking, faster 8-way entry for fork truck plus the advantages of content visibility for speedy inventory.

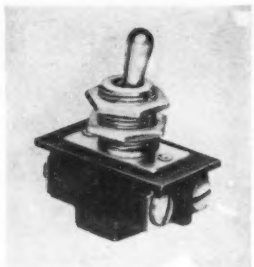
For Full Information on Palletainers...
including names and locations of users, or for obligation-free consultation on Palletainer application in your plant—write, wire or call Union Steel, today!



PALLETAINERS
UNION STEEL PRODUCTS CO.
ALBION, MICHIGAN

▲ For more details circle NED-659 B8 on enclosed inquiry slip ▲

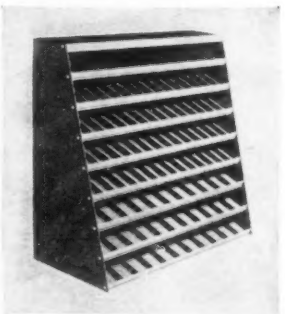
TOGGLE SWITCHES
have solder or screw terminals



Four single - pole single-throw and double-pole double-throw types of toggle switches are available with solder or screw terminals in the 2000 Series. They are nominally rated at 10 amp, 250 v ac and ½ hp, or ¾ hp, 125-250 v ac. All are UL-approved and are made for continuous service. Applications include small motors, appliances, electronic equipment, and aircraft electrical circuits. Made by **Sargent Electric Corp.**, Dept. NED, 630 Merrick Rd., Lynbrook, N. Y.

▲ For more details circle NED-660 B8 on enclosed inquiry slip ▲

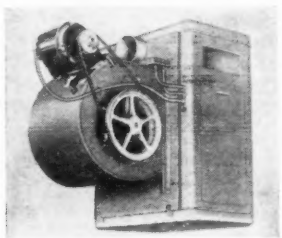
SHELVING INSERT
designed for tool storage



Convenient storage of drills, tools, taps, and other items is provided by the No. 5002 shelving insert. It has label holders on each shelf. The insert tapers in depth from 7½ in. at the top to 17 in. at the bottom. Over-all size is 33⅝ x 34½ x 17 in. Made by **Bay Products Inc.**, 3009 N. 16th St., Philadelphia 32, Pa.

▲ For more details circle NED-661 B8 on enclosed inquiry slip ▲

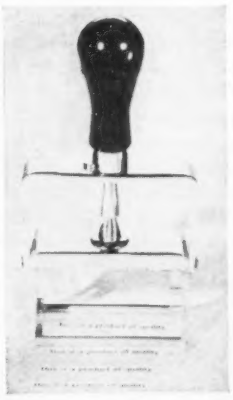
GAS UNIT HEATERS
blower models made in 10 sizes



All controls and connections are concealed within the casing of Series US-B blower-type gas unit heaters. The entire control assembly is located on one side and is accessible through a large, snap-out panel. Heaters are shipped assembled, and are equipped and AGA-approved for use in duct systems with static pressures up to 0.2 in. Ten sizes have ratings from 25,000 to 300,000 Btu. Made by **Reznor Mfg. Co.**, 168 James St., Mercer, Pa.

▲ For more details circle NED-662 B8 on enclosed inquiry slip ▲

SELF-INKING MARKER
takes a ¾ to 2½-in. rubber die



Made of cast brass and bright chrome plated, the No. 06 heavy duty Self-Inker marking device employs a nylon swivel gear to minimize wear on its only working part. Simple wrist motion provides clear, rubber-stamped impressions from the ¾ x 2½-in. rubber die. The ink pad is easily removed for reinking or changing. Price is $11.50 plus die cost. Made by **Pryor Marking Products**, Dept. DW, 434 S. Wabash Ave., Chicago 5, Ill.

▲ For more details circle NED-663 B8 on enclosed inquiry slip ▲

TEMPERATURE INDICATOR
is direct-reading instrument

Temperatures in hard-to-reach locations or at remote points are readily determined with this Model TB102 direct-reading temperature indicator. Employing the Wheatstone bridge principle, it reads the temperature of standard copper resistors at the point to be monitored. Temperature ranges can be supplied to suit application. Made by **Dynamic Development Co.**, Dept. N1, 59 New York Ave., Westbury, L. I., N. Y.

▲ For more details circle NED-664 B8 on enclosed inquiry slip ▲

Get These Catalogs on
WATER PURIFICATION
They Can Lead to
SUBSTANTIAL SAVINGS
In Your Plant or Laboratory

CATALOG "G"	Describes BARNSTEAD WATER STILLS in capacities up to 1000 gallons per hour.
CATALOG 127	Shows the Barnstead line of Water Demineralizers in capacities up to 2500 gph.
BULLETIN 141	Newest development in Pure Water Filtration . . . . Barnstead MF SUBMICRON Filter which filters out particles to 0.45 micron.
BULLETIN 139	Presents Barnstead's complete line of tin-lined Piping and Fittings to keep distilled water pure to point of use.
BULLETIN 140	Lists Barnstead's line of Water Demineralizers for Laboratory use.
BULLETIN 128	Describes the Barnstead Pressure Bantam Water Demineralizer. Employs replaceable cartridge.

Barnstead
STILL & STERILIZER CO.
16 Lanesville Terrace, Boston 16, Mass.
FIRST IN PURE WATER SINCE 1878

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ELLISCO
BRUSH TOP CANS
HAVE MANY ADVANTAGES ...MANY USES!

Use convenient, leakproof ELLISCO BRUSH TOP CANS for paints, pipe "dope", red lead, layout blue and your own products. Your servicemen, maintenance men, salesmen and customers will like these cans because they: SAVE TIME — brush fastened to can lid makes application easy; PREVENT WASTE — brush size is ideal for applying small quantities of liquids; INCREASE EFFICIENCY — they are easy to carry and always ready to use.

Write, wire or call for information and prices.

BAldwin 3-3405
Ellisco
GEORGE D. ELLIS & SONS, INC.
4012 N. AMERICAN ST.
PHILADELPHIA 40, PA.

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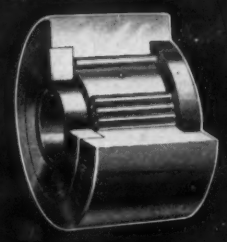
McGILL®
yoke mounted for cam action



or use as guide and support rollers

CAMROL®
CYR BEARINGS

This CYR series cam follower is especially built to use the full advantage of CAMROL Cam Followers in a yoke mounting. An inner race replaces the stud to permit mounting in a yoke or on a shaft when desirable. Both this CYR series and the standard CF series cam followers offer design advantages that provide shock load resistance, precision accuracy, simplified lubrication and longer bearing life in any automatic machinery. Roller diameter sizes range from ¾" to 4".

Write for helpful bearing handbook No. H-54-B

McGILL® *precision needle bearings*
McGILL MANUFACTURING CO., INC.
101 N. LAFAYETTE STREET VALPARAISO, INDIANA

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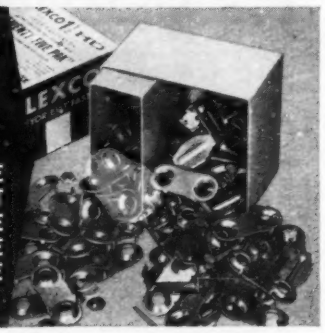
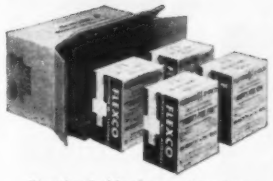
NEW FOR YOUR CONVENIENCE...

FLEXCO "25-PAK"

TWENTY-FIVE COMPLETE SETS OF FLEXCO HD BELT FASTENERS NOW AVAILABLE IN ONE EASY-TO-HANDLE ECONOMY BULK PACKAGE





Standard shipping carton contains four "25-PAK" boxes of one size fastener. Keep a supply of "25-PAKS" on hand . . . easy to store and inventory. Sturdy boxes and shipping cartons have many uses!

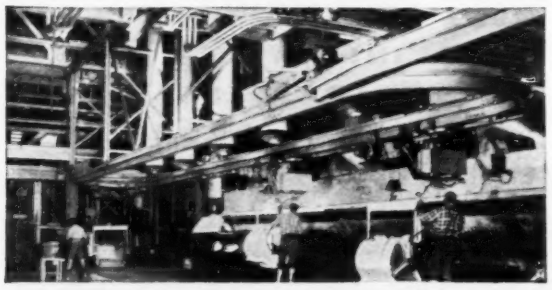
There's no need now to carry several 10-set boxes to the job—every "25-PAK" box contains 25 complete sets of FLEXCO fasteners (bottom plates, top plates, clips, nuts and bolts) . . . enough FLEXCO fasteners to join common belt widths (for example: one "25-PAK", size 1½E, will join a 36" belt).

Our savings from bulk-packaging are passed on to you. Label on each "25-PAK" box has chart indicating the number of FLEXCO HD fasteners to use for given belt widths.

Ask your FLEXCO distributor or write to us for additional information.

Flexible STEEL LACING COMPANY
4664 LEXINGTON ST. • CHICAGO 44, ILL.

▲ For more details circle **NED-668 B8** on enclosed inquiry slip ▲



Increase plant capacity... cut handling costs... reduce worker fatigue... minimize damage and loss.

You can get more profit out of your plant. American MonoRail Engineers can show you how to convert lost ceiling space—eliminate obstructive storage around machines—and gain additional operating area. Find out how you can process work in motion, cut down idle time, and assure safe handling of product. Work can be done at comfortable heights—worker fatigue lessened—heavy loads eliminated—and damage to product reduced.

Let American MonoRail Engineers plan your handling. Write for full information today.

AMERICAN MONORAIL 13116 ATHENS AVENUE CLEVELAND 7, OHIO

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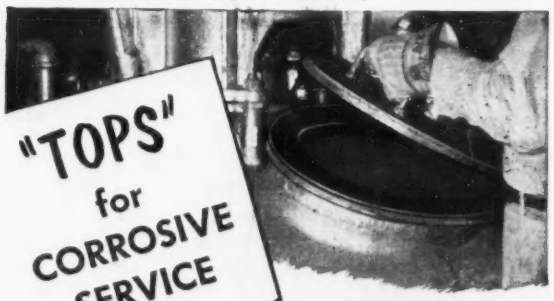

"TOPS" for CORROSIVE SERVICE

TYGON GASKETING

Tygon Plastic Gasketing is highly resistant to acids and alkalis. It is tough, resilient and non-aging; resists wear and abrasion. Cut your own from sheets, tubing or solid cord . . . or we will provide molded gaskets, grommets or seals to your specifications.

WRITE FOR BULLETIN G-520

Plastics and Synthetics Division
U. S. STONEWARE
AKRON 9, OHIO

214-E

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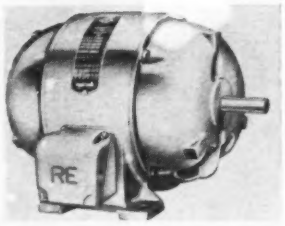
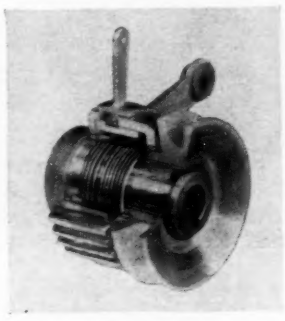
½ TO 40-HP MOTORS
NEMA rerated, with aluminum frames



Frame sizes 182 to 326U and ratings of ½ to 40 hp are available in drip-proof or totally enclosed fan-cooled electric motors. The NEMA rerated motors have aluminum alloy frames introduced in the original designs. Expandable feature permits standard power package adaptations with fluid couplings, gear reducers, and magnetic brakes. Modifications include NEMA face and flange endbells. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

▲ For more details circle **NED-671 B8** on enclosed inquiry slip ▲

SMALL CLUTCH
for up to 4-hp engine or motor loads



Adaptable for garden power tools, generators, pumps, and all types of shop and power equipment, this Model CL-57 clutch controls up to 4-hp loads. Operating on torsion spring principle, it requires no end thrust and can be made to rotate in either direction. The torque arm, fitted with rubber grommet, can be located in any of three positions 120 degrees apart. The 2½-in. pitch diameter pulley can be single or double groove. Fingertip control is suitable for remote cable operation. Distributed by **Tru-Torque Sales Co.**, 11275 Massachusetts Ave., West Los Angeles 25, Calif.

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LOAD SCALES
accurate to 0.2 of 1 per cent

Products can be weighed during hoist hook handling accurately within 0.2 per cent of full scale using MMM load scales. Weighing mechanism is sensitive to weight changes of less than one-half division. Scale weighs only 42 lb, withstands rough usage, and is unaffected by heat or cold within normal temperature ranges. Units also promote safety by warning against overloading of hoisting equipment. Made by **Manning, Maxwell & Moore, Inc.**, Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

▲ For more details circle **NED-673 B8** on enclosed inquiry slip ▲

"Been using Kester Solder for almost half a century, Tom. It's always fast and economical."

"When it comes to rigid alloy quality control, George, you have to hand it to Kester Solder."

"The Technical and Engineering Service at Kester is a great help in licking production problems, Bob."

SEND FOR "Solder . . . Its Fundamentals and Usage," the 78-page Kester textbook. It's free.

KESTER SOLDER

COMPANY 4249 Wrightwood Ave., Chicago 39, Ill.
Newark 5, N. J. • Brantford, Canada

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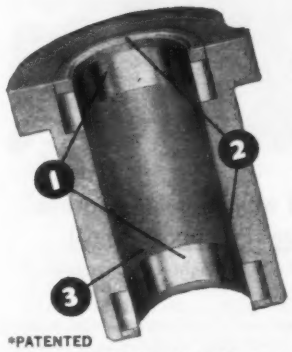
INCREASE PRODUCTION.. SAVE TIME & MONEY



*PATENTED

1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

For information and prices write for MEYCO Bushing Catalog No. 49

MEYCO
Carbide Inserted Bushings Are Doing It Daily!

How? Like this: (1) Last longer . . . with a life—in most cases—as long as solid carbide bushings at prices that approach the price of steel bushings; (2) Increased life for your drill jigs and fixtures; (3) Increased life for your drills and reamers; (4) Accuracy maintained for a LONG PERIOD of time; (5) Less non-productive machine time, less lost man-hours, because bushings need not be changed as often; (6) Inspection time saved, because of greater accuracy for a longer time; and (7) Less waste due to spoilage, for the same reason. Don't pass up a good bet! Get the dope on MEYCO Carbide Inserted Drill Jig Bushings today!

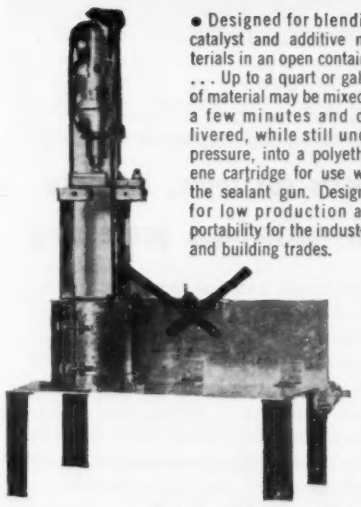
ESTABLISHED 1888

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle **NED-675 B8** on enclosed inquiry slip ▲

Pyles
PORTABLE MIXING AND FILLING UNITS

Pyles-SEMCO
SEALANT GUN
CAPACITY
2½ oz., 6 oz., 12 oz.



• Designed for blending catalyst and additive materials in an open container . . . Up to a quart or gallon of material may be mixed in a few minutes and delivered, while still under pressure, into a polyethylene cartridge for use with the sealant gun. Designed for low production and portability for the industrial and building trades.

AVAILABLE IN ONE QUART AND ONE GALLON SIZES

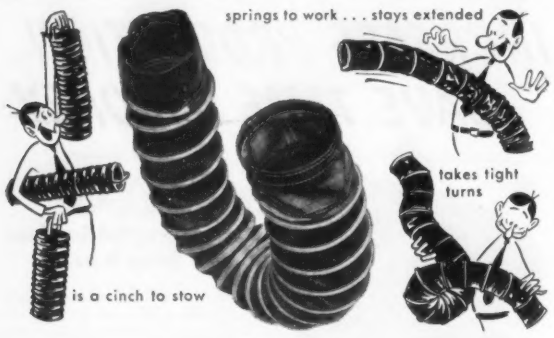
Automatic Continuous
BLENDOMETER
metering and mixing polyurethenes; epoxies, polyesters

Multi-Purpose Pumps
•
Metering and Measuring Devices
•
Hydraulic Hose Machines & Couplings
•
Conveyor Lubricators
•
"Tip-Seal" Flow Guns & Nozzles

• The Pyles Blendometer is a production unit suitable for continuous measuring and mixing of two and three part chemical systems. Chemicals, which will gravity flow, can be metered to a mixing head through variable control metering units which can be adjusted with very high accuracy. Unit measures 36" x 21" x 29½" high. Weight 500 lbs.

PYLES INDUSTRIES, INC.
8926 SECOND AVENUE • DETROIT 2, MICHIGAN

▲ For more details circle **NED-676 B8** on enclosed inquiry slip ▲



There are hundreds of ways to use Spiratube® . . . and they all save time and money!

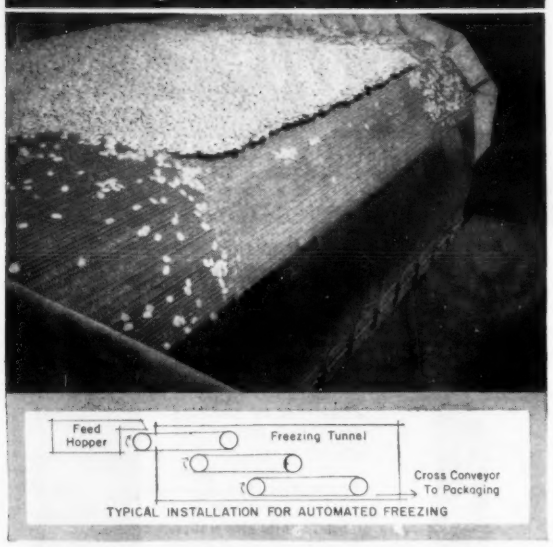
Spiratube is a highly flexible, lightweight duct that is ideal for portable and semi-permanent maintenance operations . . . for carrying air and other gases, collecting fumes and dust, transferring light solids, certain chemicals, and even abrasive chips. With it you never have to move your work to a fixed duct opening. You simply move Spiratube to your work. It's a cinch to install or disconnect and relocate. Spiratube is stocked by leading distributors throughout the United States and Canada.

For full information on Flexible Tubing ductings or the help of a field engineer, write Dept. 22.

Flexible Tubing
CORPORATION
Guilford, Connecticut
Anaheim, California • Hillside, Illinois

For more details circle NED-677 B8 on enclosed inquiry slip

Cambridge Woven Wire Belts



All-metal belts cut costs, increase production in continuous processing

Whether you process foods, plastics, ceramics, metals or chemicals, Cambridge Woven Wire Belts help you maintain high product uniformity and capacity production. Free circulation of gases, liquids, heat or cold through open mesh of belt assures faster, more thorough processing of products. Continuous movement of products on endless Cambridge belts through wet, dry, hot or cold operations eliminates batch handling and lowers operating costs. Here's why:

ALL-METAL BELTS ARE HEATPROOF, RUSTPROOF; take up to 2100° F. and sub-zero temperatures; resist corrosive attack; won't absorb oils, grease or odors.

WOVEN WIRE CONSTRUCTION MEANS LONGER SERVICE; there are no seams, lacers or fasteners to wear or break.

SPECIAL ATTACHMENTS ARE AVAILABLE; raised edges or cross flights to hold product on belt during inclined movement.

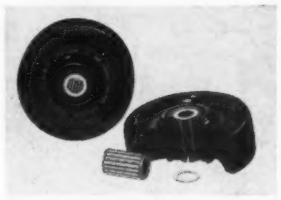
Ask your Engineering Department to contact your Cambridge FIELD ENGINEER soon. He'll explain how continuous processing on Cambridge belts can increase production and lower operating costs. And, he can recommend the belt size, mesh or weave—in the metal or alloy—best suited to your operations. He's listed in the classified phone book under "BELTING, MECHANICAL". Write for your personal copy of 130-PAGE REFERENCE MANUAL illustrating ways in which other manufacturers have employed Cambridge belts.

The Cambridge Wire Cloth Company
WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS
Department C, Cambridge 2, Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-678 B8 on enclosed inquiry slip

BLACK INDUSTRIAL WHEELS in 4 to 12-in. diameters



Long life, particularly under wet service conditions, is afforded in Durastan roller - bearing industrial wheels by use of durable black compound. They are molded under high temperature and pressure for impact strength and moisture resistance. Wheels are available in 4 to 12-in. diameters, in widths of 1½ to 3½ in. Made by **Rapids-Standard Co.,** Dept. NED, 342 Rapistan Bldg., Grand Rapids 2, Mich.

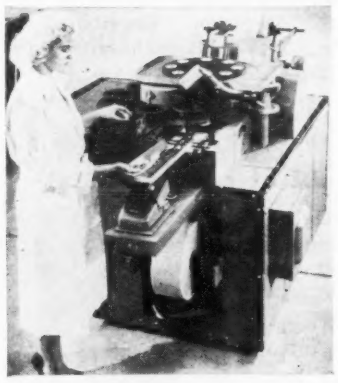
For more details circle NED-679 B8 on enclosed inquiry slip

CALKED STEEL SOLES fit on shoes to prevent slipping

Protection against slipping when walking on icy surfaces, wet wood, and stone is furnished by calked steel soles. Made of tempered spring steel and studded with sharp-pointed, case - hardened calks, they are held to the shoe by web straps. Finish is transparent, rustproof lacquer. Available from **Industrial Products Co.,** 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-680 B8 on enclosed inquiry slip

SMALL PARTS PACKAGER operates at 6000 bags per hour

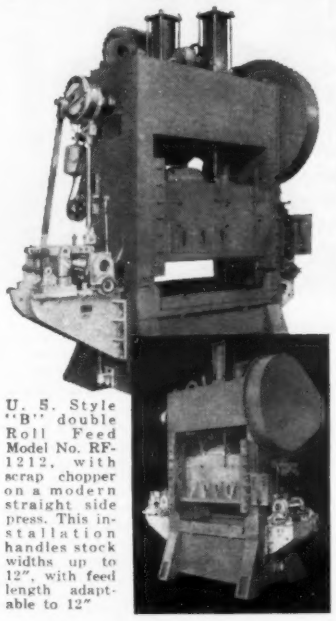


This Pax-Mor small parts packaging machine automatically prints, seals, cuts off, and counts up to 8 x 8-in. packages in a continuous flow. Parts can be packed individually or in multiples at speeds up to 6000 bags per hour. Machine uses most coated or laminated heat-sealable packing materials. Two basic sizes are equipped with electronic thermistor controls that hold roller heat to within ±1° F; upper and lower rotary turntable feeds; Syntron vibrator feed; quick-change sealing sleeves; rubber plate, Addressograph Plate, or Markem printers; U. S. Vari-drive adjustable speed motor; electric reset bag counter; empty bag ejector; and a safety cutoff. Made by **Product Packaging Engineering,** Dept. 12, 5747 Marilyn Ave., Culver City, Calif.

For more details circle NED-681 B8 on enclosed inquiry slip

FOR CONSISTENT PERFORMANCE

U. S. Style "B" Roll Feeds



U. S. Style "B" double Roll Feed Model No. RF-1212, with scrap chopper on a modern straight side press. This installation handles stock widths up to 12", with feed length adaptable to 12"

U.S. Style "B" Roll Feeds are made in double and single types, with bolster plate for O.B.I. presses or with adjustable mounting brackets for straight side presses.

All Style "B" Roll Feeds are equipped with hardened hollow ground rolls, driven by hardened spiral gears running in oil. Standard equipment includes manual roll lifters; self-equalizing brakes; two-piece adjustable driving eccentric; stock oiler and eccentric operated scrap chopper. Automatic roll lifters available in ram or adjustable eccentric operated types.

Write for your copy of Bulletin 85-N for full information.

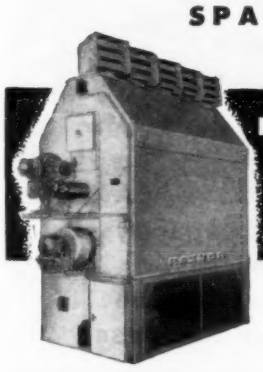
PRODUCTS

Slides Feeds | Stock Straighteners
Roll Feeds | Wire Straighteners
Coil Cradles | Die Sets
Stock Reels | Multi-Slides®
Stock Oilers | Multi-Millers®

U. S. TOOL COMPANY, INC.
AMPERE (East Orange) NEW JERSEY

For more details circle NED-683 B8 on enclosed inquiry slip

HERE'S A NEW ANSWER TO INDUSTRY'S SPACE HEATING PROBLEMS



REZNOR-OLSON
STAINLESS STEEL DIRECT-FIRED HEATERS

- 10 sizes, 400,000 to 2,000,000 BTU
- gas, oil or dual-fuel burners
- free-standing or suspended installation; easily adapted for use in duct systems
- quick and easy to install —just make fuel, electric and vent connections
- completely automatic operation
- practically no maintenance required
- ideal for primary or supplemental heating in all types of industrial building, new or old
- write for free bulletin giving complete details and specifications

REZNOR
WORLD'S LARGEST-SELLING DIRECT-FIRED
UNIT HEATERS

Reznor Manufacturing Company, 41 Union Street, Mercer, Pennsylvania

For more details circle NED-684 B8 on enclosed inquiry slip

The one-button control station—With the guard ring in the "Run" position, the circuit is maintained after the pushbutton actuates the operation. With the guard ring in the "Jog" position, the circuit is energized only as long as the button is depressed. The "Safe" position prevents starting of the machine.

ROTO-PUSH THE ONE-BUTTON CONTROL STATION

The Cutler-Hammer Roto-Push Unit offers amazing opportunities for simplified compact control panel design. One Roto-Push Unit can provide all the control functions which normally require two or three separate buttons. It is available in a wide range of selector and button operating mechanisms. Typical of its possibilities is this "Run-Safe-Jog" Roto-Push. In addition to simplifying control panel design, Roto-Push brings savings in installation time and costs, speedier, safer and more efficient machine operation. It is another star performer in the spectacular line of Cutler-Hammer Heavy Duty Oil-Tight Pushbuttons. Be sure you have full information now. Write on your company letterhead for Pushbutton Handbook Pub. EL-178.

CUTLER-HAMMER
MOTOR CONTROL
C-H

CUTLER-HAMMER Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin.

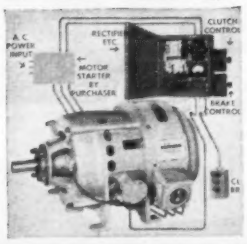
WHAT'S NEW IN MOTOR CONTROL? GET IT FIRST IN CUTLER-HAMMER

For more details circle NED-682 B8 on enclosed inquiry slip

"PACKAGE" DRIVES

MOTOR
CLUTCH
BRAKE

STARTS, STOPS AT CONTROLLED RATES



AUTOMATIC CYCLING FOR:

- CONVEYORS
- PUNCH PRESS
- SHEARS
- HOISTS
- INDEXING

. . . many applications in automation

ERICSSON-MERRITT DRIVE WITH AUTOMATIC STOP-GO CONTROLS

Compactly built around rugged Fairbanks-Morse axial air-gap constant speed motor and nationally known time tested magnetic clutch and brake components. Can be operated up to 30 cycles per minute. Available in 1½ through 15 HP units, all with constant torque and at standard motor speeds between 600 and 1800 R.P.M. 15 HP unit is 18" in dia. by 25" long. May be ordered as standard units or complete with special control cabinet for automatic cycling. Write for details today.

ERICSSON-MERRITT, Inc.
506 PINE STREET • LOCKPORT, N. Y.

▲ For more details circle NED-685 B8 on enclosed inquiry slip ▲

LUBRIVAL

—a new, different, better CIRCULATING OIL SYSTEM

Bulletin 70 tells how it works, where to use it

LubriVal is specifically designed for safe, sure, foolproof circulating lubrication of presses and automatic and semi-automatic machines.

LubriVal is a Farval system, employing the Dualine principle of pumping oil under pressure to measuring valves which deliver it to bearings. Lubricant is fed by positive piston displacement.

LubriVal Progressive Dualine Valves, manifolded in any number required, have individual sight indicators, with pressure sensing mechanism which warns of clogged or broken lines in *any part* of the system —a feature entirely new to circulating oil systems.

FARVAL
CENTRALIZED SYSTEMS OF LUBRICATION

Bring your file up to date with Bulletin 70

The Farval Corporation
3283 E. 80th St. Cleveland 4, Ohio
Sales Representatives in all major industrial market centers

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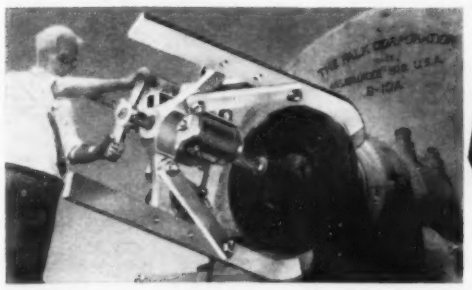
IMPOSSIBLE UNTIL OTC PULLED IT!



This giant speed-reduction unit sat unused 2 years in a Detroit factory yard because the flange was "frozen" to the shaft. Nothing moved it — until an OTC Grip-O-Matic — with **100 tons** of hydraulic "muscle" behind it — eased the flange off.

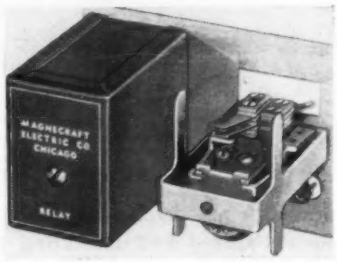
OTC Grip-O-Matics are forged of special steels with a jaw design that can't slip off the work — the harder they pull, the tighter they grip.

Such OTC hydraulic tools — Grip-O-Matics, Push-Pullers, rams — are finding increasing use in maintenance and repair departments — and on production lines, too. OTC Power-Twin rams—available in four sizes from 17½- to 100-ton capacities — are designed for near or remote control. OTC manual, electric and gasoline pumps fit all OTC rams, give plenty of power to do the "impossible" jobs **fast.**

For detailed information and free bulletins write
OWATONNA TOOL COMPANY
436 Cedar Street Owatonna, Minnesota

▲ For more details circle NED-687 B8 on enclosed inquiry slip ▲

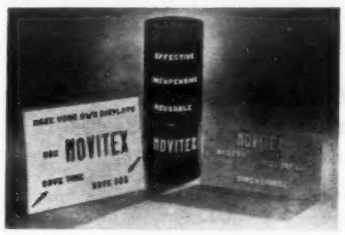
RELAY DUST COVER
mounts on strip, panel, or chassis



Removable metal dust cover for Class 22 relays is supported by a separate rigid steel frame which is attached to the relay and the customer's strip, panel, or chassis. The cover fits over the frame and is secured with a single screw. Enclosure is available with Class 22 relays of various contact combinations and types. Made by **Magnecraft Electric Co.,** 3350-K W. Grand Ave., Chicago 51, Ill.

▲ For more details circle NED-688 B8 on enclosed inquiry slip ▲

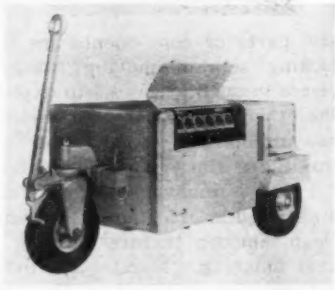
SIGN MAKER
three-dimensional plastic letters



Pliable plastic letters of ½ or 1¼ in. sizes are inserted into a perforated plastic background to form Movitex three - dimensional signs. The black, white, blue, gray, or crystal clear backgrounds from 6 x 6 in. to 24 x 54 in. cost from 60 cents to $21. Backgrounds with a gray molded plastic border are priced at $1.30 for 6 x 6 in. size to $2.80 for a 9 x 12 in. size. White, red, or black characters in sets of 100 are $3.75 to $5.75. Individual characters and black or clear easels are offered. Made by **Pryor Marking Products,** Dept. DW, 434 S. Wabash Ave., Chicago 5, Ill.

▲ For more details circle NED-689 B8 on enclosed inquiry slip ▲

400-CYCLE M-G SETS
portable and stationary models



Line of 400-cycle motor-generator sets includes both portable and stationary models. Standard and special units are available for use in industrial, military, and communication fields. Illustrated unit has an input of 220 or 440 v, ±10 v at 60 cycles, and an output of 37.5 kva, 30 kw, 80 per cent power factor, 200/115 v, three-phase, four-wire, 400 cycles, and 500 amp, 28 v dc. Made by **Ideal Electric & Mfg. Co.,** Vinson Ave., Mansfield, Ohio.

▲ For more details circle NED-690 B8 on enclosed inquiry slip ▲

MIX SOLUBLE OIL and WATER in 1/10th THE TIME

You can eliminate extra handling, save time, material and space . . . mix oil and water automatically, in the correct proportion, to form a uniform emulsion. The amazing . . .

FORCE-FLO
SOLUBLE OIL & WATER MIXER

is easy to use . . . completely foolproof . . . has no moving parts! Fits standard drums.

Takes The Guesswork Out of Mixing!

• *Write For Literature* •

Force-Flo, Inc. P. O. BOX 2442 EAST CLEVELAND 12, OHIO

— Distributors Invited —

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R&M HOISTS • CRANES • WINCHES

LOW PRICE ELECTRIC CHAIN HOIST

capacities to 2000 lbs.
lifts up to 60 ft.
prices start at $207.00

Robbins & Myers quality throughout, JC chain hoists are available from stock now, at new low prices! Features include: Special R & M hoist motor—Unit cast aluminum frame—Weston-type load brake—Sealed bearings throughout—Welded alloy steel link chain—Forged steel hook—Speed choice 34, 17, or 9 f.p.m.—Pendent rope control—Hook or trolley mounting. Write for Bulletin No. 852-B.

take it up with
ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

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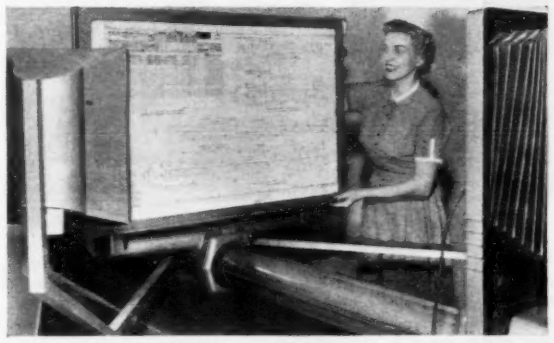
XEROX® MODEL 1218 COPYING EQUIPMENT

SPEEDS COPIES OF ENGINEERING DRAWINGS
cuts duplicating costs



Copies engineering drawings or anything written, typed, printed or drawn up to 24" x 36", by xerography onto offset paper masters for runoff of 12" x 18" multiple copies on offset duplicator . . .

Using xerography and offset duplicating, one hundred copies of an engineering drawing, reduced from 24" x 36" to 12" x 18" can be produced in about five minutes. Copies are sharp with details of the original clearly readable on the reduced size.

Xerography is a dry, electrostatic, copying process requiring no intermediate negative. No sensitized papers, water or liquid chemicals are used.

PRECUT PAPER used instead of rolls . . . eliminates print hand-cutting operations.

REDUCED SIZE saves filing space . . . saves folding and unfolding time.

COMPARE VOLUME—Rear: 350 Blueprints each of D-C-B and A sizes. Front: same quantity reproduced by xerography and offset duplicating.

WRITE for case histories showing how companies of all kinds, large and small, are cutting duplicating costs and speeding paperwork with xerography.

THE HALOID COMPANY
58-211X Haloid Street, Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. AND CANADIAN CITIES

HALOID XEROX®

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Low Cost Conductive Bootie is worn over street shoes

No need to clutter lockers and store rooms with extra pairs of shoes.

Personnel wear the LEGGE Conductive Bootie right over their own shoes, snap the garter assembly on the leg and they're protected. Static electricity is drained from the skin into your conductive flooring where it is effectively neutralized. The new Oxford height Bootie is cooler to wear than older models which covered a portion of the lower leg. Comfortable snap-on garter assembly maintains constant contact.

Made for both men and women, the Bootie Launders easily. No need to assign individual pairs. Conforms with NFPA Code #56, yet costs only about half as much as conductive shoes.

Also available: LEGSTAT, worn in an elastic band around and under the shoe. Write for full information on Bootie and Legstat today.

YOU'RE SAFE WHEN YOU HAVE LEGGE TO STAND ON — LEGGE SYSTEM of Safety Floor Maintenance

Walter G. LEGGE Company, Inc.
Dept. ND2 101 Park Ave., New York 17, N. Y.
Branch offices in principal cities

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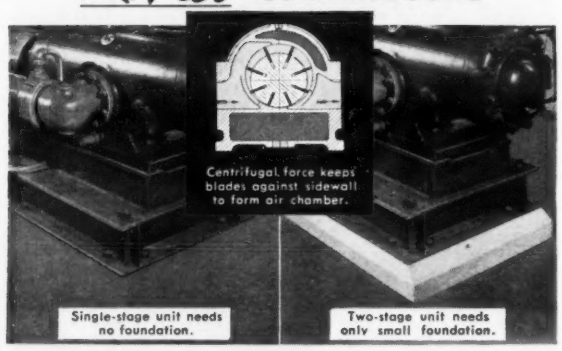
Ro-Flo COMPRESSORS



Cut foundation costs

For small units there is no slab cost at all — they are bolted directly to the floor. Larger units need only a modified base, compared with the heavy, expensive foundations required by reciprocating compressors. And it's all because of the shock-free rotation of *Ro-Flo* design. Remarkably smooth operation eliminates vibration. Automatic wear compensation at the rotor blades keeps efficiency at constant high level.

RATINGS — There are twelve sizes of two-stage *Ro-Flo* compressors to choose from. They range from 250 to 1800 cfm at pressures from 60 to 125 pounds gauge. Single-stage units handle pressures up to 50 pounds gauge, volumes from 40 to 3000 cfm.

For complete information, ask for Bulletin 16B8244. Call your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

Ro-Flo is an Allis-Chalmers trademark.

ALLIS-CHALMERS A-C A-5614

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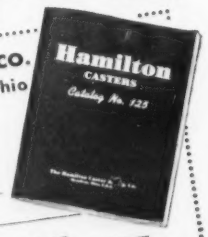
READY NOW!
. . . from Hamilton

HELPFUL NEW BUYER'S GUIDE FOR MEN WHO SPECIFY INDUSTRIAL CASTERS AND WHEELS . . . MAIL COUPON TODAY!



THE HAMILTON CASTER & MFG. CO.
1761 Dixie Highway • Hamilton, Ohio
YOUR NEW CASTER CATALOG, PLEASE.
NAME
CO.
ADDRESS ZONE STATE
CITY

Hundreds of casters and wheels for every industrial requirement are clearly illustrated and described in this big, new Hamilton Catalog. Swivel and rigid casters of forged steel, plate steel, cast steel, pressed steel and semi-steel. Single and double-wheel models. Wheels—of steel, semi-steel, hard rubber, molded plastic. Rubber tires—pneumatic, mold-on solid, semi-pneumatic, renewable. Special rubber—Neoprene, Novite, static conductive. Flanged track wheels, V-grooved wheels, cart wheels. Bearings include—ball bearings, Hyatt bearings, Timken bearings, Oilite bearings. Lifetime bearing seals. Capacities range up to 5000 lbs. per caster. *Write today.*

1907 • SERVING INDUSTRY FOR 50 YEARS • 1957

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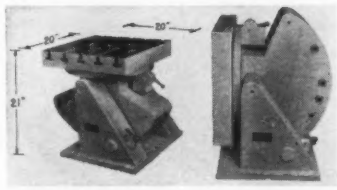
POSITIONING TABLE for drilling, tapping, and boring

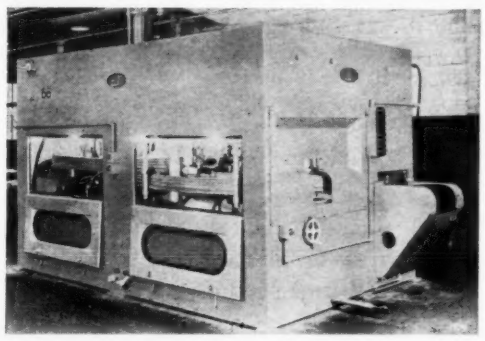


Both angular and radial positioning of workpieces for radial drilling, tapping, and boring are possible with the heavy duty Tilt-A-Turn worktable. It has 360-degree rotation, T-slots, and eight equally-spaced radial locating holes. Work can be tilted in various planes from horizontal to vertical, permitting machining of irregular workpieces without relocating or reclamping. Standard table is 20 in. square and 3 in. thick. Table and cradle are accurately located by spring-loaded indexing pins, lever operated through rack and pinion gears. An interchangeable worktable indexing plate for specific hole patterns can be used. Vertical and horizontal table heights are 20 and 21 in., respectively. Made by **Galger Engineering & Mfg. Co.,** 3802 S. Main St., Rockford, Ill.

▲ For more details circle **NED-697 B8** on enclosed inquiry slip ▲

AUTOMATIC FINISHING MACHINE uses liquid abrasive to produce microscopically smooth finish

Liquid abrasive process utilized by this automatic finishing machine produces a microscopically smooth surface on metal parts and components. Different



size parts or components are handled by two interlocking sets of moving rubber belts which grasp pieces in such a way as to expose first one side, then the other side to the high pressure slurry blast from two oscillating guns. After blasting, pieces pass through a rinse to remove sand particles.

Process removes heat treatment scale, rust, and other undesirable surface conditions. It imparts a clean, smooth texture suitable for plating or other final finishing. Nozzles are infinitely variable as to volume and pressure of the air blast with respect to volume of slurry put into blast stream. Positions of the two nozzles can also be adjusted. Machine satisfactorily finishes aluminum, copper, mild steel, stainless steel, and titanium. Made by **Lewis Welding & Engineering Corp.,** 14 Interstate St., Bedford, Ohio.

▲ For more details circle **NED-698 B8** on enclosed inquiry slip ▲

50% STRONGER
THAN COMMON SHACKLES

CROSBY-LAUGHLIN
Load-Rated
SHACKLES

⅓ TO 75-TON CAPACITIES

Guaranteed capacities are offered by new Crosby-Laughlin* "Load Rated" Shackles that have their safe working load drop forged in the body. Special alloy steels, drop forged—heat treated, plus perfect pin alignment produce quality shackles actually 50% stronger than common shackles, *size for size!* Select from a broad line of round pin, screw and safety shackles in anchor and chain styles . . . be sure you get RED fittings—symbol of *genuine* Crosby-Laughlin "Load Rated" Fittings—it's the world's most complete line. *New catalog* now available from mill supply, construction or industrial equipment distributors. Or write:

*Trademark

CROSBY-LAUGHLIN *Division*
AMERICAN HOIST & DERRICK COMPANY
FT. WAYNE 1, INDIANA

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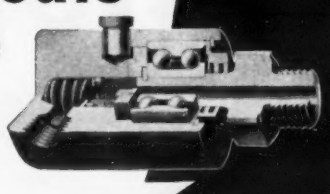
FAWICK rotorseals have 1000 uses



ROTORSEALS are by far the world's most efficient means of transmitting air, liquids or gases under pressure or vacuum into rotating shafts.

- Thousands of applications
- One to three passages
- Ready-to-use
- Life-sealed lubrication
- Speeds to 5000 rpm
- Pressures to 2000 psi
- Through-hole sizes from ⅜" to 1½"

Write for Bulletin ML-6

FAWICK AIRFLEX DIVISION
FAWICK CORPORATION
9919 Clinton Rd., Cleveland 11, Ohio
In Canada, Fawick Canada, LTD., Toronto

FAWICK Airflex — INDUSTRIAL CLUTCHES AND BRAKES

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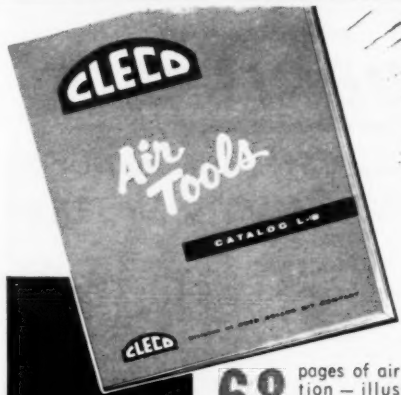

the complete air tool catalog . . .

68 pages of air tool information — illustrations, cutaways, specifications, performance data, maintenance instructions covering the complete line of Cleco pneumatic tools. Drills, screwdrivers, nutrunners, impact wrenches, grinders, chippers and scalers, riveters, rammers, paving breakers, sump pumps, multiple-spindle units, accessories... the data you need to select the right pneumatic tools for your plant . . . all under one convenient, spiral-bound cover. SENT ON REQUEST to plant executives, operating maintenance men.

Circle this number on the reader service card and add this useful literature to your reference file.

CLECO® AIR TOOLS
Division of the REED ROLLER BIT COMPANY
P. O. Box 2119 • Houston 1, Texas 105

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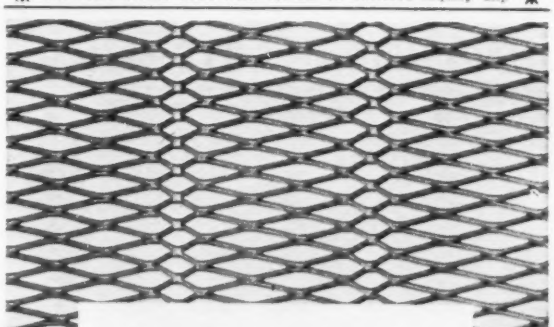

PENMETAL MULTIMESH

new look in expanded metal

MULTIMESH *Crystal* is a new expanded-metal mesh, in which there are three diamond sizes recurring in a pattern throughout the area of a sheet. This is a departure from customary patterns in which openings are uniform.

Used as an integral part of a machine or appliance – wherever perforated metals, woven wire, decorative louvers or small-mesh expanded metal have been applicable in the past – these unique patterns provide a distinctly different appearance.

Write for new leaflet 516-EM.

PENN METAL COMPANY, INC.
General Sales Office: 40 Central St., Boston 9, Mass.
Plant: Parkersburg, W. Va. PM-164

▲ For more details circle **NED-702 B8** on enclosed inquiry slip ▲

REED the Better CHAIN VISE

Modern vise has handle positioned so that it swings above bench level for tightening. Chain drops into position and locks automatically on all pipe sizes. Hardened, replaceable vise jaws have three faces for triple life. Vise mounts solidly on bench, 50% closer to edge with full 6 inches or more bearing on edge. Reed exclusive roller pulley provides maximum chain contact. This really solid vise is easier, faster and more convenient . . . does away with fumbling and skinned knuckles. Reed presents performance advantages never before incorporated in any chain vise design.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

For more details circle NED-703 B8 on enclosed inquiry slip

LIFT & SHIFT LOADS

60 TOWMOTOR ACCESSORIES AID CONTINUOUS OPERATION

Towmotor Fork Lift Trucks double as "extra" hands when equipped with standard accessories that grab, clamp, rotate, scoop, pour, push-pull and even shift loads sideways. One man does more work with less effort. 71 *plus-values* in every unit make Towmotor your best investment in a fork lift truck.

Get "Pace-Maker" Series Booklet SP-23

TOWMOTOR-GERLINGER THE ONE-MAN-GANG

TOWMOTOR CORPORATION • Cleveland 10, Ohio

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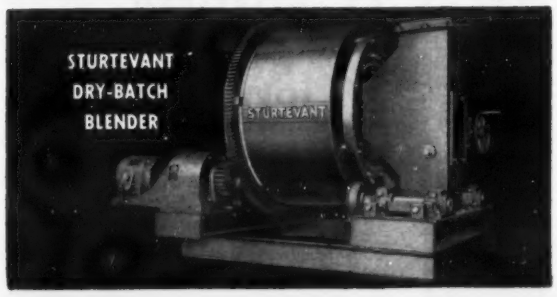
BLENDING COSTS cut 2 ways!



1. PRODUCTION SPEEDED UP BY 4-WAY MIXING
2. SHUT-DOWNS SHORTENED BY "OPEN-DOOR" DESIGN

Batches from 500 to 40,000 pounds are completely blended regardless of varying weights, densities or fineness of different ingredients. No dust loss!

Four different vertical and lateral mixing actions do the job in minimum time. Single lever control of single gate speeds loading and discharging.

"Open-Door" accessibility for quick, easy cleaning and maintenance *plus* 75-year-tested rugged construction add up to more output per machine-year.

Write for Bulletins on Sturtevant Batch Blenders and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT
Dry Processing Equipment
The "OPEN-DOOR" to lower operating costs over more years
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

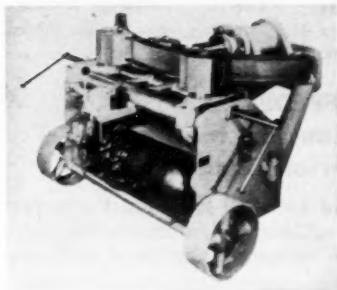
For more details circle NED-705 B8 on enclosed inquiry slip

LIFT JACK & PLATFORM
semisteel, rubber, or plastic wheels

Hand lift jack of the Roll-N-Stor handling system has a pintle which engages a bracket under the front of a semilive skid platform. Forward pull on the handle raises the skid legs off the floor. When empty, skids can be stored on end in a small area. Platforms have three full-length oak rails and a nonsagging oak surface. Wheels of semisteel, rubber, or molded plastic are offered on a range of platform sizes. Built-up superstructure is optional. Made by **Hamilton Caster & Mfg. Co.,** 1668 Dixie Highway, Hamilton, Ohio.

For more details circle NED-706 B8 on enclosed inquiry slip

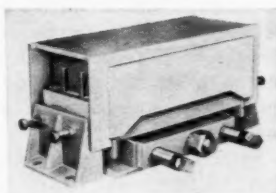
HYDRAULIC RAM BENDER
portable unit bends 6-in. objects



Pipe, I-beams, channels, angles, or similar structural shapes from 3/4 to 6 in. can be bent by the No. 420 portable hydraulic ram bender. Operator-controlled hydraulic valve actuates the ram cylinder in and out of bending position. Quickly changed dies are shaped to fit the part being bent. Of welded construction, the machine requires a floor space of 7 ft 9 in. x 7 ft 6 in., without allowance for swing of beam. Made by **Wallace Supplies Mfg. Co.,** 1304 Diversey Parkway, Chicago 14, Ill.

For more details circle NED-707 B8 on enclosed inquiry slip

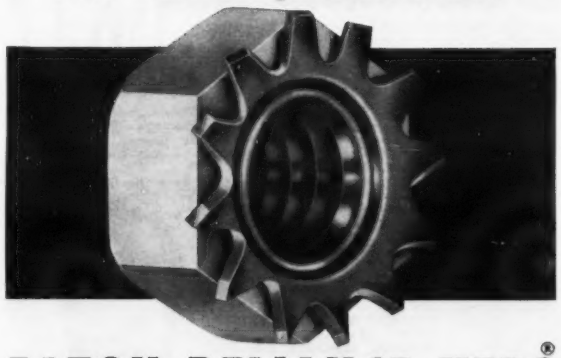
VIBRATION ABSORBING MOUNTS
easily adjustable for leveling



Available in seven load-carrying capacities ranging from 38,000 to 125,000 lb, Type SW machinery mounts absorb vibration, shock, and noise. Intended for use in multiples for installing heavy machinery, mounts are adjusted and leveled from the side. They can be placed in any position under the base for ease of installation. Adjusting bolts are readily turned for precise leveling of machine or equipment. Mounts are also adjustable for varying degrees of vibration and shock. Made by **Korfund Co.,** 48-19H 32nd Place, Long Island City 1, N. Y.

For more details circle NED-708 B8 on enclosed inquiry slip

FAST FASTENERS
for faster production



EATON-RELIANCE KEPS®
PREASSEMBLED NUTS AND TOOTH TYPE WASHERS

SEND FOR DESCRIPTIVE LITERATURE

EATON RELIANCE DIVISION MANUFACTURING COMPANY
509 CHARLES AVENUE • MASSILLON, OHIO

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For more details circle NED-709 B8 on enclosed inquiry slip

How to select the correct
VARIABLE SPEED DRIVE

Get your FREE copy now!

Complete description and engineering data on the Cleveland Speed Variator.

This unique variable speed drive gives you infinitely variable, stepless speeds up to 9:1 (from 1/3 to 3 times input speed). Precise adjustment gives instant, smooth speed change by manual, automatic or remote control.

Simple construction, compact, quiet running. No belts or complicated linkage.

Thousands already in use. Write for Bulletin K-200.

THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, O.
Sales Representatives in all major industrial markets

For more details circle NED-710 B8 on enclosed inquiry slip

THOUSANDS TO CHOOSE FROM

FREEWAY OMEGA-TYPE Semi-Precision BEARINGS

Field-proven design and quality construction are expertly combined in every Freeway unit, to give you positive anti-friction protection . . . for just pennies per bearing. So if your application calls for low RPM operation and the shaft does not exceed 1" . . . it will pay you to investigate Freeway in terms of your own specific needs. Omega-Type bearings are made right, priced right . . . and delivered "on time" regardless of the quantity required. Send for your catalog today!

Freeway washers and stampings also reflect the highest manufacturing standards . . . at the lowest cost. Mail the coupon below.

Gentlemen: I'm interested in Omega bearings. Rush me a catalog at once. In addition, tell me more about ( ) washers, and ( ) stampings.

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Freeway

WASHER & STAMPING COMPANY
P. O. Box 1756, Cleveland 5, Ohio

For more details circle NED-711 B8 on enclosed inquiry slip

PIPE 1/8" thru 30"

For Every Need

"FASTER FROM FOSTER"

TESTED AND STRUCTURAL

SPIRAL WELD
SEAMLESS
ELECTRIC WELD
LAP WELD
CONTINUOUS
BUTT WELD

FOSTER Specializes In STEEL PIPE

Call us when you need pipe — you'll appreciate the fast, dependable convenience of buying from pipe specialists. We also maintain complete Shop Facilities for every type of fabrication work.

PROMPT SHIPMENTS From Our COMPLETE WAREHOUSE STOCKS

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For more details circle NED-713 B8 on enclosed inquiry slip

DESIGNERS: HERE'S NEW DATA ON THREAD CUTTING

FOR LESS THAN $50 YOU GET 12 SETS, EACH SET GROUND READY TO GO

Men would not accept either idea at first . . .

INSERT CHASERS SAVE UP TO 33%

Insert chasers are like safety razor blades: they cost so little that you can throw them away when dull. Or, for utmost economy, you can resharpen them over and over again. Only a flash grind is required. For less than $50 you get a dozen sets of 3/4—16 insert chasers, each set ground ready to go. You will be amazed at the quantity of threads they will cut, even to Class 3 specifications, with a minimum of downtime. FREE: "Unified and American Screw Thread Digest"

THE EASTERN MACHINE SCREW CORPORATION

28-48 Barclay Street, New Haven, Conn.

For more details circle NED-714 B8 on enclosed inquiry slip

CUTS DEBURRING and CHAMFERING COSTS...

PINES TUBE AND ROD END-FINISHING MACHINE

- Fast, Easy to Operate—Clamps, Feeds, and Gauges Depth of Cut in Single Stroke.
- Interchangeable Tool Bits, Holders, Chuck Inserts.
- Combines Inside-Outside Deburring and Facing in Single Operation.
- Compact, Portable —Takes up Small Space.
- Other Models Available for Work up to 5" Diameter.
- Automatic Air-Operated Units and Specials to Suit Higher Production Needs.

(Above) Model 600 Machine has 8-speed step sheaves (760 to 3920 RPM), pivoting stock stop. Clamps and feeds work to rotating cutters. Capacity up to 2" O.D. Average production: 600-800 tube ends per hour.

WRITE FOR COMPLETE DATA— New Catalog illustrates cost-cutting features, gives production data and complete specifications.

PINES ENGINEERING CO., INC.

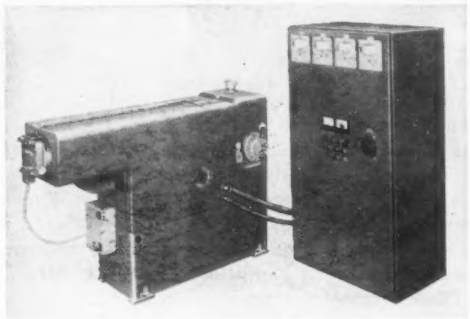
Specialists in Tube Fabricating Machinery 641 WALNUT • AURORA, ILLINOIS

PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

For more details circle NED-715 B8 on enclosed inquiry slip

THERMOPLASTICS EXTRUDERS induction heating speeds warm-up

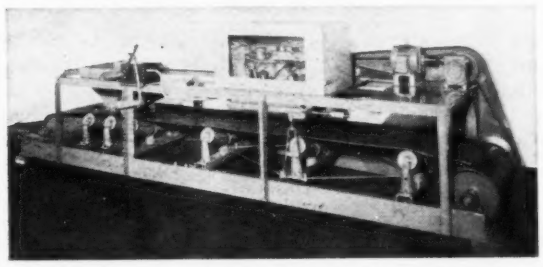
Balance between heat of the extruder and heat of the plastic being processed is maintained in line of induction heated thermoplastics extruding machines. Heating system minimizes the time required to heat the plastic, as the heat originates in the cylinder walls where it is absorbed by the plastic in the cylinder. Machines are made in sizes to meet all extrusion requirements. Made by **National Rubber Machinery Co.**, Plastics Machinery Div., Akron, Ohio.



For more details circle NED-716 B8 on enclosed inquiry slip

BELT WEIGHER-FEEDER blends and controls the flow of bulk materials accurately

Capable of maintaining accuracy to within 1 per cent of preset rate, this automatic feed-regulating continuous-weighing scale is designed to blend and control the flow of bulk materials. This packaged unit is readily installed in the conveyor line. It consists of a powered conveyor section mounted on a jig-welded steel frame, belting, idle and power rollers, and a continuous totalizing scale. Feed-regulating quadrant gate, controls, switches, and motors are included.



Feed is readily adjusted to any required rate of flow. Balance indicator, master totalizer, and electric switch mechanism are mounted in dustproof aluminum cabinet. Capacity is limited only to that of the conveyor. System can be furnished with special instrumentation including remote reading chart recorders, remote totalizing counters, and complete remote control panels. Made by **McDowell Co.**, ABCs Scale Div., Dept. NED, 16300 Waterloo Rd., Cleveland 10, Ohio.

For more details circle NED-717 B8 on enclosed inquiry slip

CIGARS-CIGARETTES-MATCHES

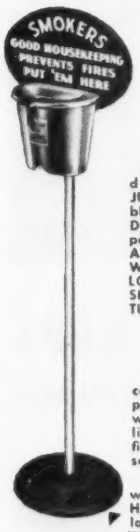
immediately extinguished ...with SIPCO DUNKING STATIONS

Fire Hazards from Smoking are a problem EVERYWHERE.

STOP FIRES BEFORE THEY START—with SIPCO DUNKING STATIONS.

Heavy duty CAST ALUMINUM canisters—guaranteed 3 years against breakage. Partly filled with water, they drown the "smoke". NO FIRE HAZARDS — NO ODORS — NO UNSANITARY CONDITION.

Lift off the canister, flip back the lid, dump it and the cleaning job is done.



Available in over a dozen different STANDARD and JUMBO SIZE models. Choice of black crinkle or bright polished DELUXE finishes to suit your particular requirements. NEAT, ATTRACTIVE — USED EVERYWHERE — OFFICES, CLUBS, LOUNGES, HOSPITALS, HOTELS, SHOPS, RESTAURANTS, INSTITUTIONS, SCHOOLS, ETC.

NEW MODEL 4J

Designed for permanent mounting on walls, posts, columns, etc. in public areas. Eliminates pilfering problem. JUMBO size canister furnished with light weight, rugged glass-fiber inner-liner. Flip back the lid—lift out the inner-liner and dump it. Inner-liner fits all JUMBO size SIPCO canisters and is available separately.

MODEL 1JD

JUMBO size DELUXE FLOOR MODEL. Heavy weighted base and attractive, eye catching sign. Height 42"—weight 26 lbs. Ideal for halls, aisles, landings, etc. Also available less sign (MODEL 1JWS). WRITE FOR ILLUSTRATED BROCHURE.

STANDARD INDUSTRIAL PRODUCTS CO.

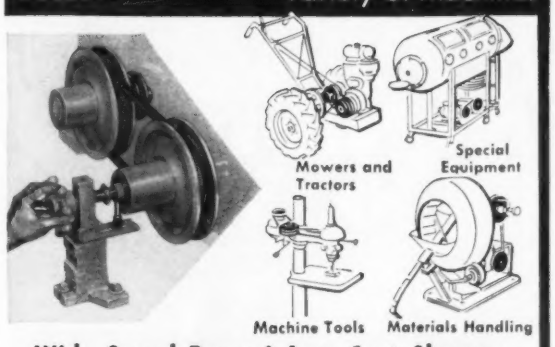
DEPT. D • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

For more details circle NED-718 B8 on enclosed inquiry slip

SPEED SELECTOR

VARIABLE PITCH SHEAVES

Control Speeds on Variety of Machines



Wide Speed Range! Low Cost Sheaves

Speed Selector Sheaves can give your machines or equipment extra wide-range speed control on fixed centers. Efficient, rugged, simple to use — low in cost! Write for Illustrated Bulletin.

CATALOG FREE! WRITE TODAY

SPEED SELECTOR INC.

P.O. BOX 312-N • CHAGRIN FALLS, OHIO

For more details circle NED-719 B8 on enclosed inquiry slip

WIRE PARTS and PRODUCTS Fast . . . Accurate . . . Low Cost

The forms shown here are only a few we make. They indicate our broad experience with different shapes, materials, finishes, welds.

Automatic wire-forming machines produce precision work on a volume basis at competitive prices, and speed up deliveries.

Finishes include baked enamel, cadmium, brite zinc, brite nickel, nickel chrome and mill finishes —in both barrel and fully automatic equipment.

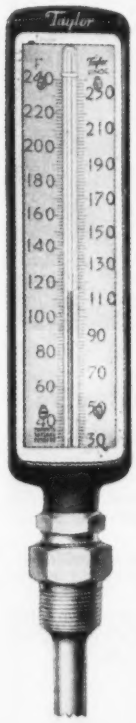
Inquiries are invited and will be answered promptly. Send sample, blueprint or drawing. We will submit recommendations and quotations without delay.

SOMMER

METALCRAFT CORPORATION

200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle NED-720 B8 on enclosed inquiry slip



Accurate, Dependable

3 TIMES EASIER TO READ!

Protect Product Quality. Taylor Industrial Thermometers are precision laboratory instruments adapted to processing equipment. They give years of accurate, dependable service, with a minimum of maintenance.

Taylor's exclusive BINOC* tubing magnifies the mercury column and makes temperatures three times easier to read—actually encourages frequent temperature checks. Choose from many stem angles and connections. All have rigid, rattle-proof, dust-proof cases with thick protective glass. Ranges from minus 40° to plus 950°F.

Write today for **Catalog E.** Taylor Instrument Companies, Rochester, N. Y., and Toronto, Ontario.

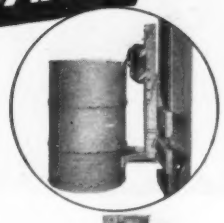
*Reg. U.S. Pat. Off.

Taylor Instruments MEAN ACCURACY FIRST

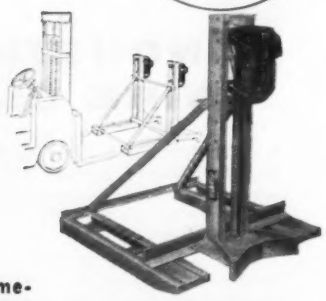
For more details circle NED-721 B8 on enclosed inquiry slip

USE THE

LIFT-O-MATIC POWER TRUCK ATTACHMENT



for HANDLING DRUMS with a POWER FORK TRUCK WITH FORKS LEFT ON OR REMOVED

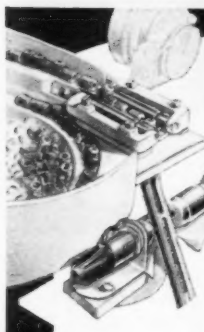


Simple, automatic, mechanical handling of any size or type of drum—single or multiple.

WRITE FOR CATALOG

MARVEL INDUSTRIES, Inc.
2246 CLEVELAND ST., EVANSTON, ILLINOIS

▲ For more details circle NED-722 B8 on enclosed inquiry slip ▲



NOW, hopper-fed headless set screws AUTOMATE SUB ASSEMBLY!

CUT Operational Time 80% to 90%
CUT Floor Area
CUT Floor Waste from 30% to 0
CUT Worker Fatigue

The photo above shows the Syntron vibratory hopper and exclusive Setko orienting device which is the heart of this new system. This orienting device assures 100% correct positioning of set screws as small as #2 (.086" x 1/8") . . . all styles and points. Other Setko innovations include photo-electric cell control of feed flow, air power, and microswitch actuation of the driver.

Two Models are available. The Vertical Feed Model adapts to drill presses, vertical tapping machines, etc. The Universal Model for horizontal feeding can be used as a separate unit, or with rotary indexing work tables.

Free Demonstration in Your Plant or Ours . . . Arrange to visit the Setko plant, or ask for the loan of the new 12 minute 16-mm color movie. Ask for a copy of Catalog 21, which describes the new Setko System, plus the complete line of Setko set screws.

102

Pat. No 2,638,945
Other Patents Pending

Set Screw & Mfg. Co. 130 Main Street, Bartlett, Illinois

▲ For more details circle NED-723 B8 on enclosed inquiry slip ▲

SEAL RING PROBLEMS SOLVED!

Molded from carbon-graphite materials, Stackpole mechanical seal rings (and mating members) are specifically "tailored" to exactly the right mix for your equipment and its operating conditions. Send details of your application for recommendation by Stackpole engineers.

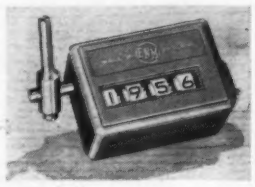
STACKPOLE CARBON CO.
St. Marys, Pa.

STACKPOLE

"EVERYTHING IN CARBON BUT DIAMONDS"

▲ For more details circle NED-724 B8 on enclosed inquiry slip ▲

SMALL RESET COUNTER
in three and four figure models



Nylon case of this British-made small reset counter protects mechanism from dirt and absorbs vibration. Offered in three and four figure models, it measures 7/8 x 1 5/32 x 1 5/16 in. and weighs only 1 oz. It operates at speeds to 1000 counts per minute and is unaffected by temperatures from 30 to 280° F. Drive-shaft can project from either side. Bold, black, 5/32-in. figures are on white background. Distributed by **Technicraft,** Dept. 11, 6222 Ridge Ave., Philadelphia 28, Pa.

▲ For more details circle NED-725 B8 on enclosed inquiry slip ▲

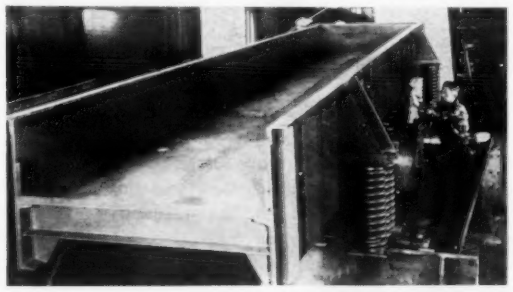
ALL-STEEL HAMMER
has contoured neoprene grip

Balanced for accurate nailing, the Nailmaster hammer has a heat treated steel handle which is permanently locked into the head. The chrome plated handle is covered with a contoured and perforated neoprene grip to guard against slipping and to cushion the shock of heavy blows. "Rim tempering" process minimizes face chipping. Curved claw 16 and 20-oz models, and ripping claw 16-oz model are made by **Stanley Works,** Stanley Tools Div., 104 Elm St., New Britain, Conn.

▲ For more details circle NED-726 B8 on enclosed inquiry slip ▲

VIBRATING FEEDER
handles large-lump bulk materials

Ore, coal, rock, and other bulk materials in lump sizes up to 4 ft diameter are handled at a rate of 300 to 3000 tons per hour by this heavy-duty vibrat-



ing feeder. It is especially useful at primary crushers and under hoppers and storage piles where heavy tonnages and lumps are transferred to belt conveyor or other material handling equipment. Sizes range from 3 x 8 up to 7 x 16 ft. Prices range upward from $4300. Made by **Hewitt-Robins, Inc.,** Dept. P, 666 Glenbrook Rd., Stamford, Conn.

▲ For more details circle NED-727 B8 on enclosed inquiry slip ▲

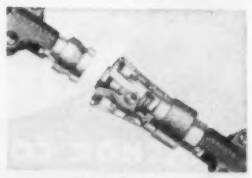
EXTRA HEAVY locking, safety type quickly detachable

Valve Coupling Locked in "On" Position

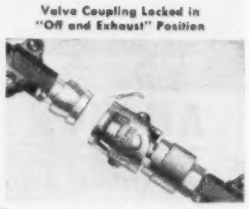
VALVE COUPLINGS

give the operator complete control of the air line at any point

Operator can shut off air and change tools quickly. Newly improved design permits the coupling to be locked in either "On" or "Off and Exhaust" position. Air in tool is exhausted to atmosphere automatically, preventing accidents. Pressure tight leak-proof construction — but free swiveling to avoid kinking the hose. For any application involving line air to 250 psi.



Valve Coupling Unlocked and Disconnected



Valve Coupling Locked in "Off and Exhaust" Position

Write for Bulletin No. 551

Quick-As-Wink®
Air and Hydraulic Control Valves and Pressure Specialties

C. B. HUNT & SON, INC.
2105 E. PERSHING ST. • SALEM, OHIO

▲ For more details circle NED-728 B8 on enclosed inquiry slip ▲

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IMS

SILICONE FLUID SPRAY

ON FILM SEALERS, CRIMPER JAWS, EMBOSSING ROLLS, PANS; STAMPING, FORMING DIES—MOLDS OF ALL KINDS

SIMPLY SPRAY ON THIS PURE SILICONE FLUID COATING
And your sticking problems are over!

The most economical way to apply costly Silicone Release Agents!

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Handy Self Dispensing Can

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PRICES (Delivered)
Sample Can.....$2.00
Per Unbroken Dozen.....$18.00
Per Unbroken Gross.....$197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE RD. CLEVELAND 20, O.

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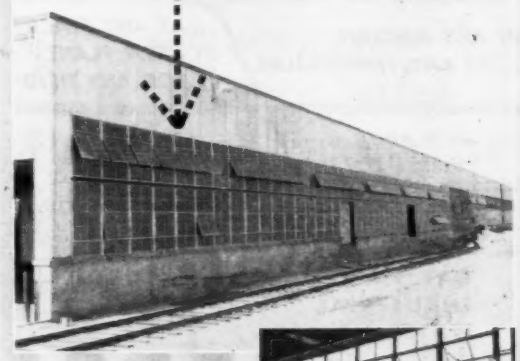
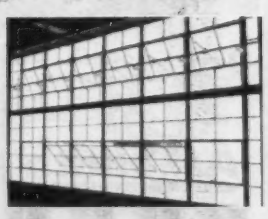
another industrial glazing problem SOLVED!

Photographs courtesy of The Firestone Tire and Rubber Company



structoglas "A"



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Dollar-savings start the moment you install STRUCTOGLAS "A" fiberglass-reinforced plastic panes and panels. Here's why:

★ STRUCTOGLAS "A" installs quickly and easily . . . no need for extra-careful handling.
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★ Provides years of glare-free natural daylight that helps slash lighting costs.
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Use the coupon below to get all the facts about STRUCTOGLAS "A".

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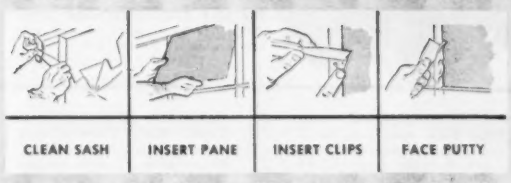

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7876-IM

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Now . . . a complete expansion control system in one compact, easy-to-operate tool. Powerful pneumatic motor drive . . . simple finger-tip adjustment . . . precision torque sensing mechanism automatically controls expansion within .001 of an inch. Smooth, "no-shock" operation prevents operator fatigue . . . lowers tube rolling time and costs.

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REPRESENTATIVES in principal cities of U.S.A., Canada, Mexico, South America, England, Europe, Puerto Rico, Italy, Japan, Hawaii.

AIRETOOL MANUFACTURING COMPANY
SPRINGFIELD, OHIO

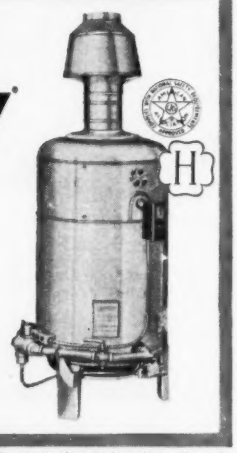
EUROPEAN PLANT: Vlaardingen, The Netherlands
CANADIAN PLANT: Brantford, Ontario

For more details circle NED-731 B8 on enclosed inquiry slip

HOT WATER
ECONOMICALLY

IN ANY AMOUNT ... AT ANY TEMPERATURE
... AT ANY PLACE IN YOUR PLANT ... FOR ANY NEED

WITH AN
A.O.Smith Burkay
GAS-FIRED INDUSTRIAL WATER HEATER



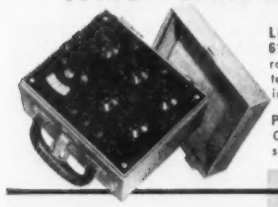
Relieve Your Overtaxed Boiler
Write For Complete Facts

Through research ... a better way
A.O.Smith CORPORATION
Permaglas Division, Dept. NED-258
Kankakee, Illinois

For more details circle NED-732 B8 on enclosed inquiry slip

Shallcross BRIDGES

15 Stock Models
... 10^{-6} ohms to 10^{6} megohms



LINEMAN'S FAULT-LOCATION Model 6100: (illustrated), Wheatstone, Murray, Varley, Hilborn & Fisher Loop tests. Compact, splash-proof carrying case.

PORTABLE WHEATSTONE Model 6101: 0.001Ω to 11.11 megΩ. 4-dial rheostat usable as decade box.

PRECISE WHEATSTONE-LIMIT Model 6320: Most accurate 5-dial bridge for direct measurement, 0.00001Ω to 111.11 megΩ. Also includes adjustable comparison range for percent-limit testing, from 0.0001Ω to 11.111 megΩ.

COMBINED KELVIN-WHEATSTONE Model 638-R: Single ratio dial selects overlapping Kelvin & Wheatstone ranges, 0.0000001Ω to 11.11 megΩ. Separate current and potential terminals minimize errors on Kelvin range.

MEGOHM-WHEATSTONE Model 6350: Wheatstone with dc amplifier and null indicator measures 0.01Ω to 1.111 x 10^{6} megΩ. Modular construction.

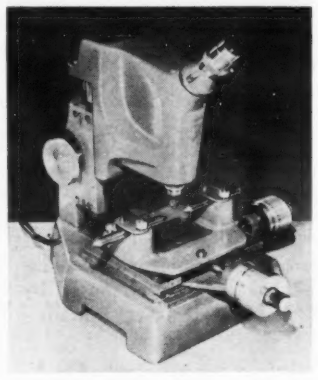
PERCENT-LIMIT Series 617: Nine models for direct measurements or rapid "GO-NO GO" production line testing within predetermined tolerances.

Full details in Shallcross Bulletin L-19B

SHALLCROSS MANUFACTURING CO. • 540 Pusey Avenue, Collingdale, Pa.

For more details circle NED-733 B8 on enclosed inquiry slip

TOOLMAKERS' MICROSCOPE
lenses provide 27 to 360 X range



Inspection and measurement of drills, taps, jigs, templates, broaches, milling cutters, reamers, and small work parts are easily made with this Bausch & Lomb Toolmakers' microscope. Standard lenses supplied with the 23-lb precision instrument give 35 X magnification. With interchangeable eyepiece and objective lenses, total range is 27 to 360 X. Instrument has angled eyepiece, simple screw adjustment to align cross lines, rack and pinion focusing, and working distance of 4 in. Parts up to 2½ in. deep can be focused on. Integral true-vertical illumination eliminates shadows. Measurement is possible in two directions, controlled by micrometer spindles reading to 0.0001 in. Available from **DoALL Co.**, 256 N. Laurel Ave., Des Plaines, Ill.

For more details circle NED-734 B8 on enclosed inquiry slip

SHEET METAL SHEARS
ring, circle, and slitting types handle 16 to 20-gage steel

Ring and circle shear cuts circular discs, holes, rings, irregular outlines, and straight lines in blanks of any shape. It has a welded steel bed, adjustable swing and slitting gages, and inclined lower cutter to keep off-fall material flat and usable. Two power and two hand models cut circles from 3½ to 44 in. diameter in up to 20-gage mild steel.

Circle shears for cutting circular discs or arcs and for slitting have a vertically adjustable upper cutter that is parallel to the laterally adjustable lower cutter. Two power and three hand models with a 16 to 20-gage mild steel capacity cut 3 to 60-in. circles.

Rotary slitting shears are the cutting heads of circle shears offered as individual units for bolting to a bench. Practical for slitting long sheets, they are available in two power and two hand models with a 16 to 20-gage mild steel capacity. Made by **Niagara Machine & Tool Works**, Northland Ave. & Chelsea St., Buffalo 11, N. Y.

For more details circle NED-735 B8 on enclosed inquiry slip

dependable

ANCHOR CONVEYOR TURNS

ANCHOR Traction Wheel Turns are designed with a square frame for strong installation, and mounting holes in line with rail for easy alignment. Traction Wheel Turns can be furnished with bronze or graphalloy bushings; tapered roller or "Lubricated-for-Life" bearings. ANCHOR also supplies Roller Turns and other conveyor components, or completely installed conveyor systems.

ANCHOR STEEL & CONVEYOR CO.
6906 KINGSLEY AVE. DEARBORN, MICHIGAN

For more details circle NED-736 B8 on enclosed inquiry slip

INDUSTRIAL WIRE CLOTH

• REYNOLDS WIRE DIVISION of the National-Standard Company produces industrial wire cloth in standard and special weaves in a complete range of meshes, metals, alloys and coatings . . . in all normally required widths.

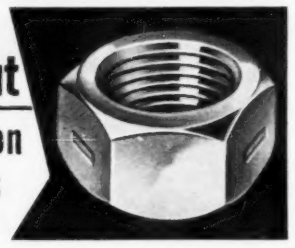
Write to Reynolds for specific information on the products we make and on our facilities for developing special wire cloth to fit your specifications.

Reynolds Wire Division • Dixon, Illinois

NATIONAL STANDARD

For more details circle NED-737 B8 on enclosed inquiry slip

NEW Centerlock Nut saves production time... speeds application



Here is a new low cost lock nut that can be applied from either end, double chamfered, with the locking feature in the center. The greater speed in application of these Centerlock Nuts can make definite savings in production time and provide low cost fastening. Ideal for customer assembled products.

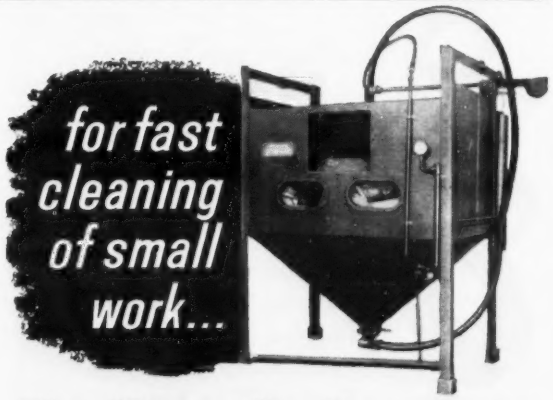
The New Centerlock...

• Can be automatically fed • Will lock wherever turned on bolt • Does not depend on friction against work for locking • Can be applied from either end • Will not damage bolt threads • Available in steel, Brass, aluminum or stainless on special order • Offered in finished series, double chamfered from ¼" thru ⅞" in fine or coarse threads. Machine screw sizes #8, #10, and #12 also available. Heavy series made to special order only • Also in closed and open end acorn type • Large inventories carried for immediate shipment. 119

Write for samples and NEW CATALOG today

GRIP NUT COMPANY
106 Maple Ave. South Whitley, Indiana

For more details circle NED-738 B8 on enclosed inquiry slip



The Versatile Pangborn Blast Cleaning Cabinet

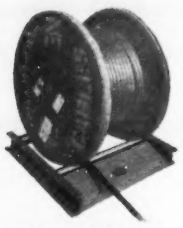
This Pangborn Cabinet is perfect for small or intermittent jobs! Use it for production or maintenance . . . use it with any type of abrasive, at almost any air pressure. You'll find that it cleans quickly and thoroughly, that it is easy, economical and safe to operate. Shipped fully assembled . . . from $365.00 up. For full details, write to PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Maryland.

Mfgrs. of Blast Cleaning & Dust Control Equipment

Pangborn BLAST CLEANS CHEAPER

For more details circle NED-739 B8 on enclosed inquiry slip

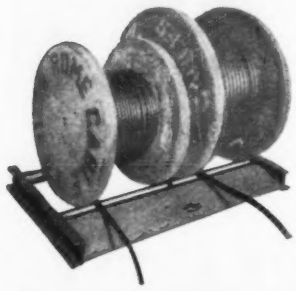
LOAD 'EM . . .
LET 'EM ROLL
HANDLE REELS
THE EASY WAY!



Easy, simple, efficient, time and labor-saving. Just load cable, wire or rope reels on Roll-A-Reel and let 'em roll on the ball-bearing adjustable rollers, on heavy steel frame.

Style "A" 2,000 lbs. cap. for reels up to 28 in. wide. (weight 60#)

PRICE — $46.50
F. O. B. Cincinnati



- ★ No jacks
- ★ Handle any reel diameter
- ★ Heavy steel frame
- ★ Slanted front
- ★ Ball-bearing adjustable rollers
- ★ Positive roller lock for unloading

Style "B" 4,000 lbs. cap. for 2 reels up to 24 in. wide each, or 1 reel up to 48 in. wide. (weight 110#)

PRICE — $84.50
F. O. B. Cincinnati

(Special sizes quoted on request)
Order today...or write for details

ROLL•A•REEL
4630 Reading Road
Cincinnati 29, Ohio

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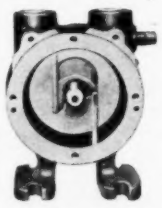
VACUUM PROBLEM?
LEIMAN HAS THE ANSWER!

- Over 70 years' experience
- Many types, sizes, models
- Engineering representatives in all industrial centers

4-WING TYPE
Vacuum to 20" Hg.
Pressure to 15 psig.
Volume to 162 cfm.

Get Leiman "Lifetime" Construction

Leiman Vacuum Pumps operate 10, 15 and 20 years without trouble or maintenance because they take up their own wear. Fewer moving parts—made of durable cast iron and steel (no composition)—provide higher vacuum and volume, with smaller pump and motor. Run quietly. Every pump tested before shipment. Consult us on your needs. WRITE for 16-page Catalog and 24-page Application Book.



2-WING TYPE
Vacuum to 29.9" Hg
Pressure to 20 psig.
Volume to 40.8 cfm.

Leiman Bros., Inc.
167 Christie St., Newark 5, N. J.
Established 1887

LEIMAN Rotary Air and VACUUM PUMPS

▲ For more details circle NED-741 B8 on enclosed inquiry slip ▲

LOST!
FLOOR REPAIR EXPENSE
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SMOOTH ROLLING,
HEAVY DUTY,
PNEUMATIC
CASTERS

No. 4-837-93

Save your floors and cut down on noise with COLSON casters. Precision built to the highest quality available to withstand the severest use through years of rugged service, COLSON sets the standard.

The complete COLSON line consists of every possible type of industrial caster needed, with capacities up to 1500 lbs. To roll it easier, quicker, smoother...demand trouble-free COLSON quality casters. Choose from ni-steel, rubber or plastic wheels.

Write for catalog today or call a COLSON specialist listed in the yellow pages of your phone book.

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PILLOW BLOCK
self-aligning, uses no lubrication

Designed to run dry or submerged in any fluid that will not corrode its cadmium plated steel housing, this self-aligning pillow block has a carbon-graphite insert that can be used up to 650° F. Size B accommodates shafts from ¾ to 1½ in. diameter. Worn inserts can be rotated 180 degrees, then reused before replacement is necessary. Self-aligning blocks are available with finished inside diameters and with split inserts for ease in assembly around a shaft. High compressive strength, noncontaminating material will not seize or score mating parts. Made by **Electro-Nite Carbon Co.**, 8610 Torresdale Ave., Philadelphia 36, Pa.

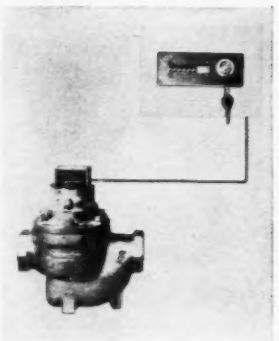
▲ For more details circle NED-743 B8 on enclosed inquiry slip ▲

ROTARY FACE SEALS
for high speed rotating shafts

Difficult sealing problems involving high speed rotating shafts are solved with line of rotary face seals which operate from −320 to 1200° F. The bellows spring seal is a machined part without openings, precluding leakages. The seal, with the proper sealing face material and bellows spring, remains stationary against the rotating shaft face. Facings can be carbon, tungsten carbide, or other suitable material which meets temperature and pressure requirements. Made by **Skinner Seal Co.**, 3003 Sutter St., Santa Ana, Calif.

▲ For more details circle NED-744 B8 on enclosed inquiry slip ▲

LIQUID METER
has remote control counting device



Electric counting device of the Henszey industrial chemical liquid meter operates by remote control and can be mounted in any convenient eye-level location. Meter itself may be hidden. When a number of meters are involved, all the counters can be mounted on one central control panel. A key resets each counter instantly. The 2 x 5½-in. remote units have vertical or horizontal dials. Meter can be adapted for many liquids, measuring accurately regardless of liquid temperature or specific gravity. Made by **Henszey Co.**, 202 N. Water St., Watertown, Wis.

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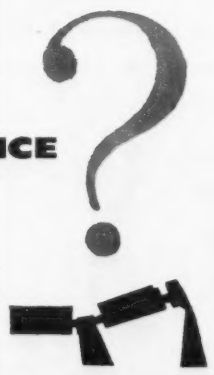
which
IDLER
is
MAINTENANCE
FREE
?

(Joy Limberoller Idler)



(Conventional 3-roll idler)

The Limberoller idler on the left is a single roll idler consisting of a series of neoprene discs molded to a flexible steel cable. The idler hangs in a curve between two bearings, one on either side of the belt, up out of the dirt. There are no bearings down under the belt . . . no bearing failures. As the Limberoller idler turns it flexes, keeping itself free of material build-up. The Joy Limberoller Belt Conveyor Idler has completely eliminated idler maintenance at many plants.

WRITE FOR BULLETIN 216-54

JOY MANUFACTURING COMPANY
Oliver Building, Pittsburgh 22, Pa.
In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario

WSW L6960-216

▲ For more details circle NED-746 B8 on enclosed inquiry slip ▲

B&W's New Pressure-Temperature Bulletin
FB-77

specially prepared for piping engineers

Here, in easy-to-use form is B&W's new 48-page Bulletin FB-77 which summarizes and correlates the various specifications of the ASME code for Pressure Piping (ASA B31.1 and B31.1.8), and the ASME Boiler and Pressure Vessel Codes (Section I and VIII). Also included is the ASA B16.5 specification covering the pressure-temperature ratings of Forged Steel Flanges. It serves as an excellent time-saving convenience in computing the minimum safety requirements for the designing of various types of piping systems.

Write for B&W Bulletin FB-77 today — on your company letterhead please.

THE BABCOCK & WILCOX COMPANY
Tubular Products Division • Fittings Department
3839 West Burnham Street • Milwaukee 46, Wisconsin

THE NATURAL SOURCE FOR ALLOY FITTINGS
B&W TUBULAR PRODUCTS DIVISION
FA-8901 FL1

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Performance Tested
Fluid Power Components

pump generators • valve controls
motor converters • cylinder converters

FREE CATALOG
INCLUDES COMPLETE SPECS AND DRAWINGS

Specific Data—made available only by Commercial—now graphically illustrates "valve back pressure" (pressure drop because of internal circuiting) and simplifies the design of a complete hydraulic-power circuit. Combined with previously available information on pumps, cylinders or motors, valve performance data published by Commercial now makes it possible for any designer to *accurately* determine the ultimate performance characteristics of his proposed hydraulic-power circuit.

Proper evaluation and final selection of controls for the fluid power system you are designing is easy when you have Commercial's complete "performance" data at hand.

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shearing and stamping
Youngstown 1, Ohio

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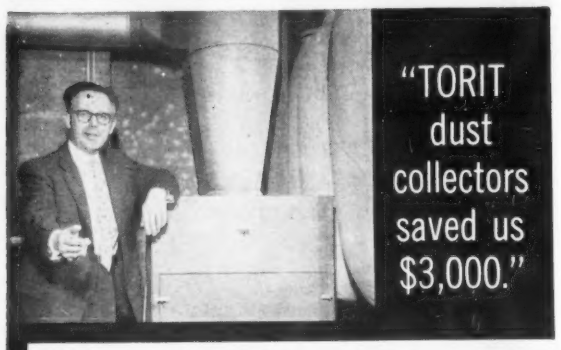


FREE BOOKLET shows you how to trap harmful dust better at less cost with TORIT.

Your plant can have the same initial savings and cost-cutting operation now enjoyed by the Sico Manufacturing Company, national producers of tables and seating equipment. Sico President, Kermit H. Wilson states, ". . the lowest bid we had for a central dust collection system of minimum capacity was just under $4,000. Our $900 Torit installation has completely solved our dust problem and gives us greater flexibility than would be possible with a central system." There's a TORIT Collector to meet every type of dust problem, why not investigate?

FREE facts on TORIT DUST COLLECTORS that reduce maintenance costs, up production, improve employee morale. Write today to:

TORIT MANUFACTURING CO.
287 Walnut Street, St. Paul 2, Minn., Dept. 202

For more details circle NED-750 B8 on enclosed inquiry slip

IMMEDIATE SHIPMENT

TOOL STORAGE INSERT

No. 5002

$44.75

Convenient storage of drills, tools, taps, insert tapers from 7½" at top to 17" at bottom. Label holders on each shelf. Sizes 33⅝" w x 34½" h x 17" d.

Prices F.O.B. factory or warehouse Philadelphia. Complete shop box and shop equipment on request.
Phone BAldwin 9-1805

BAY PRODUCTS INC.

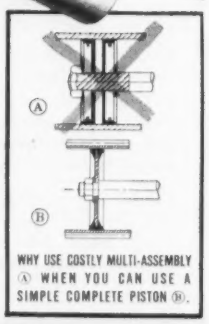
3009 N. 16th ST., PHILADELPHIA 32, PA.

For more details circle NED-751 B8 on enclosed inquiry slip

HERE'S SIMPLE ECONOMY

DOUBLE ACTING ONE-PIECE ALLIS PISTON CUPS

A single unit piston and cup packing. Made of brass plated steel or solid brass metal disc. Specially compounded rubber is securely bonded to the metal. Designed for oil, air or water applications, lips are designed to maintain uniform pressure on cylinder walls insuring constant sealing action. Used in cylinders—feeds—filling machines, clamps or vises, hoists, pumps, valves, etc.



Send for Free Literature
BULLETIN 108

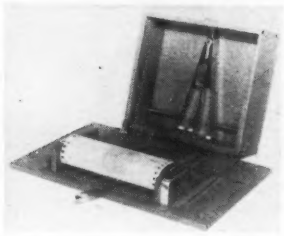
SINCE 1899

CHICAGO-ALLIS MFG. CORP.
Producers of CHICAGO BELTING • ALLIS RUBBER • ALLIS SEAL Products

130 NORTH GREEN STREET • CHICAGO 7, ILL.

For more details circle NED-752 B8 on enclosed inquiry slip

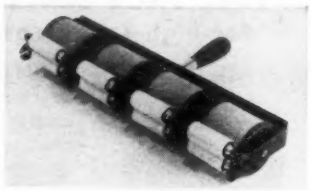
IMPACT RECORDER
checks freight car shipping impacts



Intensity and number of impacts received by a shipment in a freight car or truck are recorded by the Model RM impact recorder. Using the same calibration as the Savage Impact Register, unit features an impact actuated mechanism to advance the recording chart at predetermined impact speed. It is built of ¼ in. thick magnesium plate by **Impact Register Co.,** Dept. N, Box 445, Champaign, Ill.

For more details circle NED-753 B8 on enclosed inquiry slip

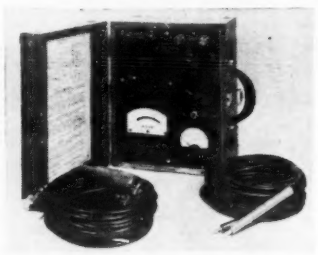
CONTINUOUS ROLL PRINTER
for hand use or permanent mounting



Spanish felt used on Dri-Flo rollers of the Rollamatic continuous roll printer holds enough ink for thousands of impressions, yet releases only enough ink to produce clear, nonblotting, smear-free marks. No pressure is required, and all impressions are uniform. Both single and multiple units have handles for hand use. For permanent mounting, handles are replaced with holding attachments. Each printing roll is a separate unit and one or more colors may be roll-printed at the same time on all types of porous and nonporous materials. Made by **Krengel Mfg. Co.,** 229 Fulton St., New York 7, N. Y.

For more details circle NED-754 B8 on enclosed inquiry slip

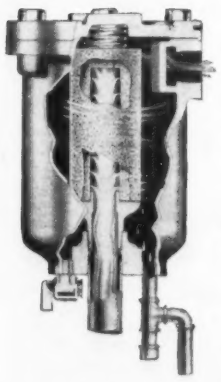
SURFACE RESISTANCE TESTER
makes accurate microhm tests



Checks on cleanliness of aluminum or other sheet material, an essential step in maintaining spot welding quality, are made by the Model 151-S microhm meter. It makes accurate surface resistance measurements in a 0-75 microhm range. A selector switch "cuts in" multipliers for additional higher ranges up to 750,000 microhms. It also measures resistance of coupons in a test jig or resistance of actual sheets at the welder head. Trouble-shooting on welding equipment and locating abnormal resistances of electrodes and current paths are other uses. Made by **J. W. Dice Co.,** 16 Highwood Ave., Englewood 11, N. J.

For more details circle NED-755 B8 on enclosed inquiry slip

ADAMS PORO-STONE AIR FILTER,
designed to remove oil, water and foreign matter from compressed air lines with minimum pressure drop.



The R. P. Adams Poro-Stone air filter is engineered to efficiently remove entrained oil, water and pipe scale from compressed air lines. Liquid droplets and solids being carried by the gas stream are first removed by centrifugal action in an annular chamber. Secondary filtration is achieved by passing the air or gas stream through a poro-stone unit. An automatic trap can be provided to discharge the residue from the cyclone chamber.

At rated capacity the filters operate at a maximum pressure drop of only ½ lb., thus insuring delivery of line pressure to the point of consumption.

The units require virtually no service or maintenance—thereby insuring continued trouble-free, low cost performance.

ADAMS Poro-Stone air filters are available from stock in sizes to suit your needs. For further information, write today for Bulletin 117, R. P. Adams Co., Inc., 227, East Park Drive, Buffalo 17, New York. *(Advt.)*

For more details circle NED-756 B8 on enclosed inquiry slip

WHERE HIGH HEAT CONCENTRATION IS IMPORTANT . . . SPECIFY

WATLOW'S
FIREROD
CARTRIDGE HEATER

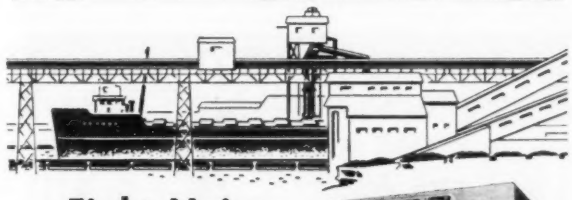
offers you
5 times more heat
. . . in the same space!

FREE BULLETIN
Operation data, tests, performance charts, etc. Yours on request.

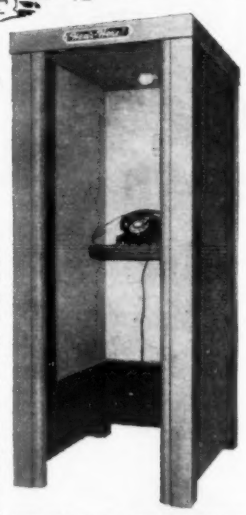
- New high in watts densities and temperatures!
- L-o-n-g-e-r cartridge life!
- New design flexibility — the same heat as a standard cartridge heater in a unit 1/5th the size!

WATLOW
ELECTRIC MANUFACTURING CO.
1374 Ferguson Avenue
Saint Louis 14, Missouri

For more details circle NED-757 B8 on enclosed inquiry slip



Eight Noisy Car Shakers Can't Stop Phone Talk in this Acousti-Booth!



Nowhere could the Burgess-Manning "Hear-Here" Acousti-Booth be put to a more severe test than at the Unloading Station of the Rail-to-Water Transfer Corporation dock! Supt. Jack Best writes: "We have several of your booths that are performing very satisfactorily. We can transfer a million tons of coal a month from cars to lake steamers and all this coal is dumped from the cars, with the aid of 8 noisy car shakers, within a few feet of these booths. In spite of this noise, which makes it almost impossible to converse at the top of our lungs in the open, we can carry on phone conversations, necessary for our complex operation, inside your doorless booths!"

"Another "Hear-Here" Booth is installed in our sub-station, where 4 motor generators make phone conversation impossible without it."

Burgess-Manning "Hear-Here" Acousti-Booths make important phone conversations possible in even the noisiest locations. Avoid errors, misunderstandings—install the Burgess-Manning "Hear-Here" Acousti-Booths.

AVAILABLE IN STYLES TO SUIT EVERY PURPOSE WRITE FOR CIRCULAR A-142-2D

BURGESS-MANNING
"Hear-Here"
DOORLESS ACOUSTI-BOOTH

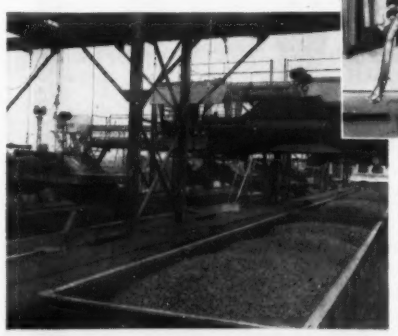
An Island of Quiet in the Noisiest Locations.

Built according to Scientific Acoustical Principles.

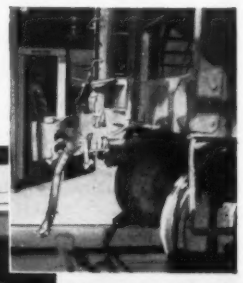
No Doors to Break or Stick.

No Corners to Collect Rubbish.

Fresh Air Always — No Foul Odors.



Rail-to-Water Transfer Corporation, Calumet River Dock in Chicago.



"Hear-Here" Acousti-Booth at Unloading Station. 1,000,000 tons of coal a month can be unloaded within a few feet of this booth, yet phone conversation can be carried on freely inside this doorless booth.

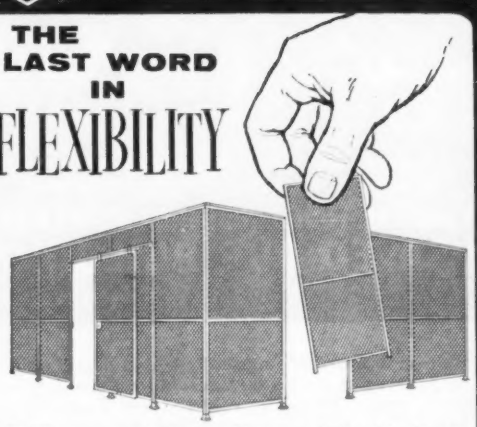
Heating Cooling Acoustical

BURGESS-MANNING COMPANY
Architectural Products Division
5970 Northwest Highway, Chicago 31, Ill.

For more details circle NED-758 B8 on enclosed inquiry slip

WIPCO WIRE PARTITIONS

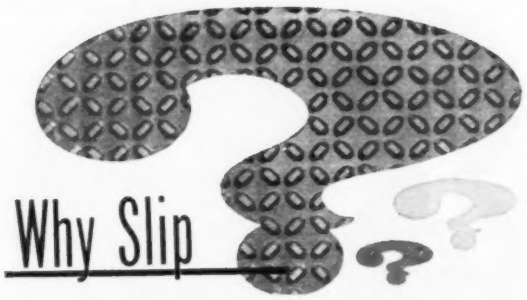
THE LAST WORD IN FLEXIBILITY



WIPCO woven-steel wire partitions are designed to fit any area, regardless of height, location of doors and other openings, etc. Easy and economical to erect, your own men can put them up without outside help! Use them over and over again, salvaging each individual section for use in new erections. Available in *standard* sections from stock—or *custom-built* for any requirement, WIPCO partitions are easy to paint and clean—require little or no maintenance! For increased efficiency and flexibility at lower cost, get the facts on WIPCO wire partitions!

Write Today for Bulletin P-55!
WIRE & IRON PRODUCTS INC.
1727 SIXTEENTH STREET, DETROIT 16, MICHIGAN

▲ For more details circle **NED-759 B8** on enclosed inquiry slip ▲



. . . when there's MULTIGRIP!

Eliminate dangerous—and potentially costly—slippery areas in your plant with USS Multigrip Floor Plate. You can do this because Multigrip Floor Plate has clean-edged, flat-topped risers that give positive traction to feet and wheels. These tough steel plates won't chip, crack or splinter and they're kept clean with hose or broom. On ramps, stairs, aisles, platforms, or floors—wherever you need durability plus safety . . . you need Multigrip Floor Plate. It's available in large plates, eliminating installation waste.

UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS multigrip FLOOR PLATE

Sold by leading distributors from coast to coast

UNITED STATES STEEL

▲ For more details circle **NED-760 B8** on enclosed inquiry slip ▲

CARING FOR WAXED FLOORS IS . . .

A cinch with Sanax

It waxes as it cleans!

REDUCES THE FREQUENCY OF REFINISHING

Sanax was developed to permit frequent cleaning of waxed floors *without washing away the finish* . . . and to eliminate waste in wax and labor. A neutral liquid soap with a wax base, *Sanax* not only quickly removes dirt, oil, and grease, but *leaves a thin film of wax*—a lustrous anti-skid protective finish. *Safe for all floors.* Highly concentrated . . . economical to use. For consultation, literature, or demonstration, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5502 East St., Elkhart, Ind.

For machine-scrubbing or damp-mopping waxed floors

FINNELL SYSTEM, INC.
Originators of Power Scrubbing and Polishing Machines
FINNELL
BRANCHES IN ALL PRINCIPAL CITIES

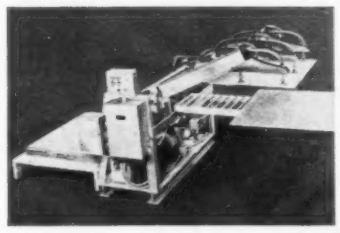
▲ For more details circle **NED-761 B8** on enclosed inquiry slip ▲

TAPE RECORDER
dual speed model has three speakers

Recording of conferences and sales presentations, low-power public address jobs, and recording of announcements to be "piped" through a plant sound system are among applications for the Knight KN-4010 dual speed tape recorder. An accessory foot pedal start-and-stop control permits dictation-transcription use. The pushbutton operated unit has an 8-w push-pull amplifier and two built-in speakers, plus a third speaker in a separate case for remote placement in the room. A transistorized preamplifier for low hum and noise, digital index counter, and automatic shutoff system are other features. User can select either the $7\frac{1}{2}$ or $3\frac{3}{4}$-ips tape speed. Frequency response at $7\frac{1}{2}$ ips is 65 to 12,500 cps, and recording time at slow speed is 3 hr. Made by **Allied Radio Corp.**, Dept. NED, 100 N. Western Ave., Chicago 80, Ill.

▲ For more details circle **NED-762 B8** on enclosed inquiry slip ▲

SHEET FEEDER
handles cardboard, plastics, metal sheets of regular, irregular sizes



Flat or formed sheets of cardboard, plastics, metal, asbestos board, and other materials, either rectangular or irregular in shape, can be handled at up to 15 per minute by this sheet feeder. It delivers sheets from a 4-ft high pile to slitters, punch presses, forming machines, etc., or it can be used to remove sheets from conveyors or machine tables for stacking at up to 15 sheets per minute. Sheets can be picked up and/or delivered horizontally, vertically, or at any angular position.

Machine will feed automatically upon signals from an associate machine, timing device, sheet sensing mechanism, or from the feeder itself upon discharging a sheet. Feeding cycle can be triggered manually by pushbutton control. Machine utilizes a suction cup carrier and carrier transfer frame in handling sheets up to 6 x 15 ft. Cups can be mounted to conform with the shape of each individual sheet. Made by **De Florez Co.**, Feeder Dept., 116 E. 30th St., New York, N. Y.

▲ For more details circle **NED-763 B8** on enclosed inquiry slip ▲

The BECO

Super Lift
LEVER DOLLY

- Why Pay More!
- Guaranteed
- Stronger
- Safer

- For immediate shipment, wire phone, or pin this ad to your letterhead and mail to:

BECO - Bettendorf, Iowa

Four Models ● Metal or Rubber Wheels

▲ For more details circle **NED-764 B8** on enclosed inquiry slip ▲

Enlarge knockouts to 5 5/8" in seconds

Make accurate holes faster, easier... save with GREENLEE Knockout Punch Driver

A few easy strokes on the handle of the GREENLEE 7646A Hydraulic Knockout Punch Driver, and the punch cuts smoothly through a 10-gage metal box . . . time, 10 seconds! Makes knockout punching go fast and easy, even in cramped quarters. Cuts are accurate . . . slugs drop loose in die — just turn it over and they fall out. Small, handy driver develops *eleven tons* of ram force! Write GREENLEE Tool Co., 1942 Herbert Ave., Rockford, Illinois for new free illustrated bulletin.

GREENLEE Hydraulic Knockout Punch Drivers, Knockout Punches, Complete Sets — any combination your jobs require.

TOOLS FOR CRAFTSMEN
GREENLEE

▲ For more details circle **NED-765 B8** on enclosed inquiry slip ▲

MADE BETTER THAN NEED BE

JENKINS
O.S.&Y. U-BOLT
GATE

Costs Less to Use

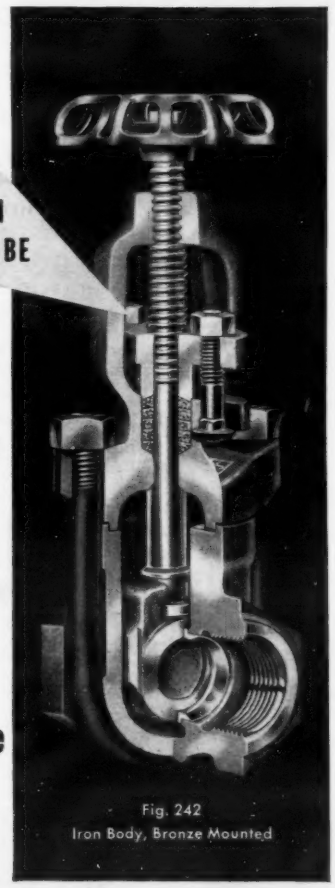


Fig. 242
Iron Body, Bronze Mounted

YOU PAY NO MORE for a Jenkins Outside Screw & Yoke U-Bolt Gate valve. Yet longer life and reduced maintenance is bound to result from the extra ruggedness, the precision manufacture and unique design features which Jenkins puts into these general utility valves.

Choose the O. S. & Y. pattern for services where spindle threads must be kept out of the destructive effects of fluids in the line; where spindle threads must be cleaned and lubricated regularly or where a rising spindle is needed to indicate wedge position.

Ask your local Jenkins Distributor or write Jenkins Bros., 100 Park Avenue, New York 17, for descriptive folder No. 207 showing wide range of patterns and metal combinations of Jenkins U-Bolt gates.

JENKINS
LOOK FOR THE JENKINS DIAMOND
VALVES
JENKINS SINCE 1864 Jenkins Bros

Sold Through Leading Distributors Everywhere

▲ For more details circle **NED-766 B8** on enclosed inquiry slip ▲

Other FLEX-A-PRENE "Firsts"

- Lint free — no wicking action.
- All parts non-toxic — non-allergic.
- Self-adjusting — snug-fitting.
- Simply designed for easier filter removal.
- Inside of frames serrated for airtight locking.
- Weighs only 1 ounce.
- Designed for use with goggles or spectacles.
- Only 4 tough long-wearing, interlocking parts.
- Non-irritating plastic frames — unbreakable in normal usage.
- Prenex filter outlasts all throw-away types. Savings pay the cost of a complete mask.

sample $1.50 postpaid

Positive Protection Against Pigment Overspray!

Quantity prices as low as $1.15 (Industrial Prices Only)

FLEXO Products, Inc. Westlake, Ohio

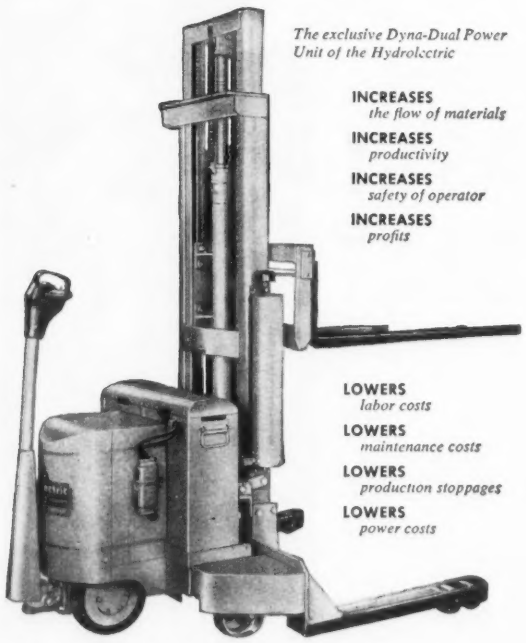
▲ For more details circle NED-767 B8 on enclosed inquiry slip ▲

MODERNIZE WITH

America's most Modern Truck

HydroLectric

A GREAT NAME IN LIFT TRUCKS



PUT THESE MODERN FEATURES TO WORK GREATER PROFITS AT NO ADDITIONAL COST

- Two driving wheels instead of one
- Braking with handle in any position
- Automatic parking brake (optional)
- Sealed alloy gears instead of chains
- Sealed ball-bearing rollers in masts
- 100% more steering ease with two wheel drive
- Power unit removal complete in 20 minutes
- Greater tire capacity equivalent load ratings

The only truck with 2 driving wheels and 2 braking systems. In fact Hydrolectric does everything a good lift truck should do.

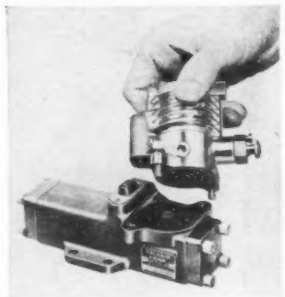
STUEBING Designed • Engineered • Built

LIFT TRUCKS, INC., 2423 Spring Grove Ave. CINCINNATI 14, OHIO

THERE IS A TRUCK FOR EVERY PURPOSE TO HANDLE ANY KIND OF MATERIAL.

▲ For more details circle NED-768 B8 on enclosed inquiry slip ▲

CONTROL VALVES
plug-in, ¼ in., four-way type

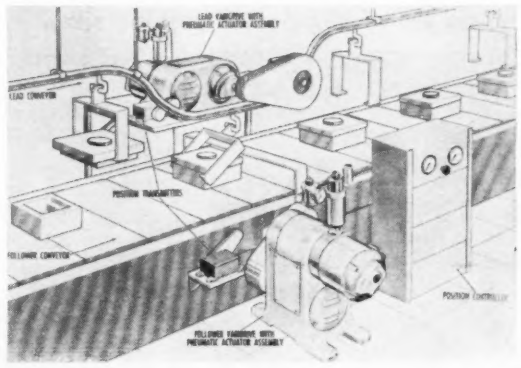


Plugs and connectors incorporated in solenoid pilot, valve body, and manifold or subbase complete all electrical circuits automatically in Speed King line of ¼-in. four-way control valves. Permanent wiring connections need not be disturbed during in-service maintenance. Valves control small devices, and are available in single and double solenoid types for manifold or subbase mounting. Solenoid pilots are built to JIC standards, and are interchangeable between single and double solenoid types. Designed for 30 to 250 psi air service, the valves have solenoid coils for any alternating or direct current voltage. Made by **Valvair Corp.**, 947 Beardsley Ave., Akron 11, Ohio.

▲ For more details circle NED-769 B8 on enclosed inquiry slip ▲

LINK SYNCHRONIZATION SYSTEM
transfers parts from follower conveyor to lead conveyor

This position or link synchronization control system allows variable speeds of assembly or production conveyors on applications where absolute position



control between the two conveyors is required. System consists of two Varidrive or Varidyne motors, one for the lead conveyor and one for the follower conveyor. Also embodied in system is a position controller and two position transmitters.

Position control assures that parts or transfer hooks carried by lead conveyor and matching parts carried by follower conveyor reach transfer point at precisely the same time. Position synchronization is accomplished by system regardless of base speed of conveyors, load variations on individual conveyors, or differences in conveyor lengths. Position is held within ±3 in. Made by **U. S. Electrical Motors Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.

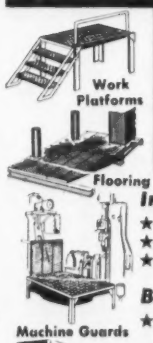
▲ For more details circle NED-770 B8 on enclosed inquiry slip ▲

FOR MAXIMUM SAFETY

all over your plant use Safety GRIP-STRUT

Pat. Pending

the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.



Important Safety Features

- ★ Fire proof
- ★ Slip proof
- ★ Maximum strength
- ★ Minimum weight
- ★ Easy to stand on
- ★ Cool in summer — warm in winter

Big Economy Features

- ★ For balconies—no extra light needed below—no extra heat.
- ★ No extra supports necessary—channels are integral part of the material
- ★ No secondary sprinkler heads needed
- ★ Self-cleaning
- ★ Cut and installed like lumber by your own maintenance force
- ★ Low in original cost

Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

Write for Catalog

PRODUCTS DIVISION
THE GLOBE COMPANY • *Manufacturers since 1914*
4002 S. PRINCETON AVE. • CHICAGO 9, ILL.

▲ For more details circle NED-771 B8 on enclosed inquiry slip ▲

Beautiful South Shore Inn, on Lake Wawasee, Syracuse, Indiana, operated by Jones Hotel System

Tropical rubber-base CEMENTKOTE "SAVED OUR BUILDING"

says R. A. Neilsen, manager

Rain and snow penetrated, froze and popped off large areas of stucco surface, causing costly repair each year. Tropical rubber-base Cementkote, applied in 1955, waterproofed the surface. To date: three years with NO maintenance! Cementkote protects and decorates all concrete, stucco, block, brick and masonry surfaces.

FREE! BULLETIN, COLOR SAMPLES

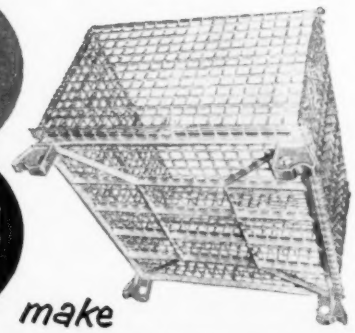
Your letterhead request brings complete information and color samples on Cementkote. Write today!

75th ANNIVERSARY

TROPICAL PAINT COMPANY
1124-1296 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

▲ For more details circle NED-772 B8 on enclosed inquiry slip ▲

7 outstanding features make



CARGOTAINERS®

Best for Handling Your Materials

1. Visible inventory
2. Completely collapsible
3. Self-centering stacking legs
4. Self-cleaning
5. Eight way entry
6. Rugged construction
7. Light in weight

Write today for full information

CARGOTAINER DIVISION

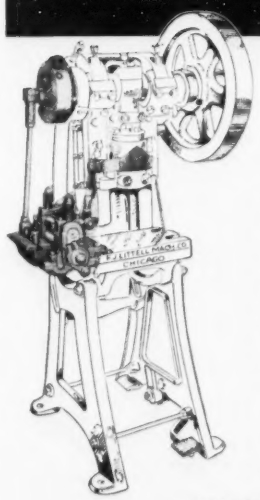
TRI-STATE ENGINEERING COMPANY
315 W. Beau Street
Washington, Pennsylvania

▲ For more details circle NED-773 B8 on enclosed inquiry slip ▲

Automation in Action . . .

LITTELL Style "M" ROLL FEED

Makes Any Punch Press Fully Automatic— and 3 Ways Better



- **FASTER** . . . 9,000 stampings an hour at 200 strokes per minute, or 4500 stampings an hour at 100 strokes per minute are easy production rates on any press with Style "M" Roll Feed.
- **SAFER** . . . Automatic feeding with Style "M" Roll Feed keeps hands and fingers safe from costly accidents.
- **LOWER IN COST** . . . Faster, automatic production from low cost coil stock cuts cost per stamping. Greater safety gives your presses the lowest insurance rate.

The Style "M" Roll Feed is quickly and easily installed on any standard punch press. Several models are available—the largest feeds coil stock up to 8" wide and .055" thick. All models feed left to right, right to left or front to back. Feed direction is reversed by reversing the clutch. On large models, feed length per stroke is from 0 to 4⅜" with standard gears, and from 0 to 8½" with compound gears. Feeding rolls are hardened and ground for long service life. Style "M" puts automation in your press room at lowest possible cost.

Write for the Littell Catalog Section "A"

F. J. LITTELL MACHINE CO.
Speed with Safety

ROLL FEEDS • COIL CRADLES
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle NED-774 B8 on enclosed inquiry slip ▲

New

MEGGER® LOW RESISTANCE OHMMETER

- Completely Self-Contained
- Convenient, One-Man Operation
- Battery or Rectifier-Operated Models
- Ideal for Field or Bench Use

RANGES
0 to 1,000 microhms
0 to 10,000 microhms
0 to 100,000 microhms
0 to 1 ohm

FEATURES

1. Measures accurately down to 10 microhms
2. Open, easy-to-read, 3¼" scale
3. 4 ranges: In addition to the x1 position on the selector switch it multiplies scale x10, x100 and x1000
4. Small size—13" x 6" x 7"
5. Light weight—only 10 pounds
6. Sturdy carrying case keeps instrument, leads and prods in one place, ready for use.

NEW CLAMP DESIGN ON TEST LEADS

Special clamp type test leads 18 feet long are available on special order. The extra length facilitates tests in elevated or remote locations without moving the instrument close by. Especially important in testing large circuit breakers. Clamps are of duplex type, each makes current and potential connection when applied. This permits one man to make tests.

WRITE FOR BULLETIN 24-46-D

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle NED-775 B8 on enclosed inquiry slip ▲

with BAND-IT® CLAMPS you can

BAND IT
CLAMP IT
BRACE IT
SECURE IT
TIE IT
FASTEN IT
CONNECT IT
CLASP IT
ANCHOR IT
CINCH IT

EASIER-QUICKER-LONGER-STRONGER

THE BAND-IT TRIO

All it takes to do the above—quickly—without waste. Clamps of all diameters formed from continuous roll of BAND-IT Band.

Over 1500 Authorized BAND-IT Distributors throughout the United States and in 59 other countries of the world.

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BAND-IT CO.
Incorporated 1937
4761 Dahlia St., Denver 16, Colorado U.S.A.

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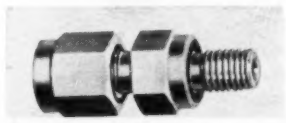
FLASHLIGHT-CIRCUIT TESTER
has built-in jack for testing

Low resistance circuits can be tested for continuity by the No. 1625CT tester. It features a built-in jack and can be used without adjustment as a flashlight. Three 1½-v Size D batteries are used for checking wiring, controls, circuits, fuses, grounds, shorts, broken wire, switches, and relays. Use of two testers in series makes it possible to check wiring or controls and cables of about 1500 ft of 18-gage copper tinned wire to 7500 ft of 12-gage wire at two different places. Made by **Bright Star Industries,** 600 Getty Ave., Clifton, N. J.

▲ For more details circle NED-777 B8 on enclosed inquiry slip ▲

TUBE FITTINGS
for both high and low pressures



A straight thread O Seal male connector and O Seal adapter comprise this fitting for both high and low pressure systems, as well as critical applications where even minute leaks cannot be tolerated. O-ring built into body of fitting assures high vacuum seal against any flat surface. Connector and adapter are available in sizes ranging from 1/16 to 1 in. from **Crawford Fitting Co.,** 886 E. 140th St., Cleveland 10, Ohio.

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FRONT-END LOADER
lifts 1750 lb to 10 ft height

Three sizes of buckets are available for use on this front-end loader for Ford and Ferguson tractors. It has a high carbon steel frame and will lift a 1750-

lb load to a height of 10 ft (to bottom of bucket). All cylinders are double-acting, rams are chrome plated, and hardened pins have Zerk fittings. Xtra Trax traction-flotation wheels for most makes of tractors provide crawler type action on wheel type tractors, reducing slippage under any soil condition. Easily attached, the wheels need not be taken off for operation on hard-surfaced roads. Made by **Freeman Loader Corp.,** Dept. IL, Blair Pike Rd., Peru, Ind.

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HIGH-SPEED SAW WITH CLAMP TABLE MAKES IRREGULAR SHAPE CUTS

WRITE FOR FREE CATALOG

LOW INVESTMENT SAW CUTS METAL FAST & CLEAN

Whether you're making straight cuts, odd angle cuts or irregular shapes such as turbine impeller blades, you'll find the Ty-Sa-Man 144 BD combination of speed and amazing accuracy will save you money. Table has positive air-driven clamps to hold material in any position. Other Ty-Sa-Man cut-off models from 10" to 58" cuts . . . long-cut saws for 4' to 60' cuts, with or without cross movement, for friction or abrasive sawing.

Ty-Sa-Man MACHINE COMPANY
550 WHITE AVE., KNOXVILLE, TENNESSEE

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METZGAR NYLO-® BALL TRANSFER

- UNITS
- TABLES
- STANDS

LASTS 10 TIMES LONGER

RESISTS DETERGENTS MILD ACIDS ALKALIES SALT BRINE FOOD ACIDS SAND • OIL

METZGAR NYLO-BEARINGS, WHEELS and ROLLERS are available in all Metzgar Conveyors.

Ball units factory pressure-mounted in 3/16" steel base on ¼" x 2" supporting frame on adjustable "H" stands. Height adjustable in 4 ranges from 10" to 50"

Write for prices and specifications.

METZGAR CONVEYOR CO.
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MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES
GRAND RAPIDS 4, MICH.

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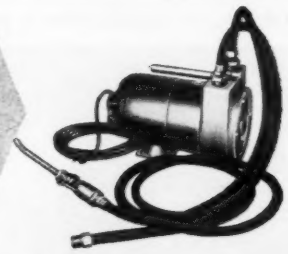
you can use



THIS SELF-PRIMING PUMP

Available with 1/8, 1/4, 1/3, 1/2 and 3/4 hp motors, Series SP 4400 portable self-priming Brady pump from 5 gpm @ 21 ft. to 70 gpm @ 15 ft. of water or soluble oil to 200 S.S.U.

FEATURES:
CAST IRON CONSTRUCTION
BALL BEARING MOTOR
CAST BRASS IMPELLER
CARRYING HANDLE
HANDLES ABRASIVES OR STEEL CHIPS
EQUIPPED WITH CORD AND PLUG, SUCTION AND DISCHARGE HOSE AND VALVE CONTROL NOZZLE
SINGLE OR 3-PHASE 3450 RPM MOTOR
COMPACT—LIGHT WEIGHT

USES:
MACHINE TOOLS (Except Grinders)
STANDBY COOLANT SERVICE
LIQUIDS—DRUMS TO SUMPS
LIQUIDS—SUMPS TO SERVICE
STANDBY—EMERGENCY USE

Write today for performance curves and prices —

Brady PUMP CORPORATION
1001 E. 18th St. Muncie, Indiana

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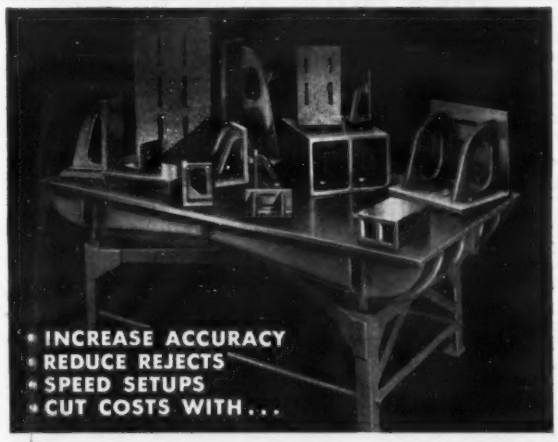

MACHINE PRODUCTS PRECISION EQUIPMENT

You'll hold closer tolerances and increase efficiency, too, when you use Machine Products precision surfaces. Because the combination of superior materials, skilled craftsmanship and rigid quality controls in the manufacture of Machine Products equipment assures you of the precise dimensional accuracies you require. A complete line of plates and accessories is available, so send for your free catalog today.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Rd. • Detroit 12, Michigan

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New, Lightweight, Powerful FLEXIBLE TOOL SHAFT Connects To Any Motor

Stow flexible tool shafts increase precision, eliminate operator fatigue on production grinding, polishing, sanding and other finishing operations in which the operator must hold the tool for long periods of time. Up to 3 HP can be transmitted through these new tool shafts, which consist of a core made of highest grade music wire rotating inside a rubber-covered casing. Each shaft furnished with ball bearing motor connection and high-speed ball bearing handpiece with removable wheel Arbor having ½-20" threads. An angle head can be used in place of the handpiece as shown in the photograph.

Four Sizes of these shafts are available . . . models 38, 40, 50 and 63, which come in 6-foot standard lengths. The largest shaft, model 63, will handle 3 HP at speeds up to 6900 RPM and has a maximum capacity for various accessories as follows: grinding wheel, 8" x 1"; buffing wheel, 8" x 1"; sanding disc, 9" diameter; sanding drum, 6" x 2½"; wire brush, 8" x 2"; steel drills, ½" diameter.

Write for Catalog 57

STOW MANUFACTURING CO.

26 Shear St. Binghamton, New York

▲ For more details circle **NED-786 B8** on enclosed inquiry slip ▲

SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

ONE MAN easily handles this SKIL ¾" drill

10 Pounds Lighter Than Other ¾" Drills

Now, you get unmatched lightness, shorter length, with maximum power. That's because this new Model 2123 has a lightweight, sturdy die-cast aluminum alloy housing—makes it 10 pounds lighter than most other ¾" drills, 3" shorter. Yet it produces more power for the toughest heavy work. One man can easily handle it for overhead work. Excellent for use with wood augers for deep boring in timbers, as well as with twist drills for steel. Has 4 ball and 4 needle-roller bearings for years of dependable service. New low price makes it $15 to $20 cheaper than leading competitive models.

Specifications—Model 2123: Adjustable spade handle, detachable pipe handle, 3-wire cord and connector, 60 cycle A.C. or D.C. 60 cycle motor, enclosed double pole—momentary contact trigger switches, full load speed 225 RPM, length 17¾", weight 16¼ lbs., shipping weight 19 lbs., price: only $120.00.

SKIL

Made only by SKIL Corporation, manufacturers of famous SKIL and SKILSAW products, 5033 N. Elston Ave., Chicago 30, Ill. In Canada: 3601 Dundas St. West, Toronto 9, Ontario.

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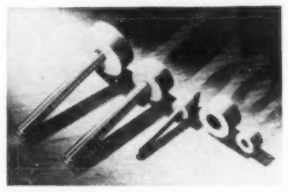
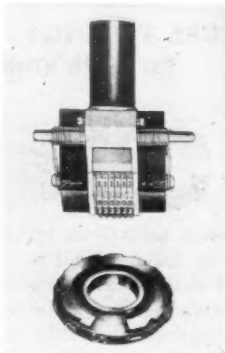
DIAMOND MOUNTED POINTS in 3/32 to 1 in. diameters



Blending process used in making this line of diamond mounted points and hones assures uniform distribution of virgin diamonds in the resinoid-bond. Points are made in 3/32 to 1-in. diameters; hones in standard and special sizes. Points are mounted on solid carbide shanks for rigidity and efficiency in hardened steel and carbide die finishing operations. Made by **Elgin National Watch Co.,** Abrasives Div., Dept. N, Elgin, Ill.

▲ For more details circle **NED-788 B8** on enclosed inquiry slip ▲

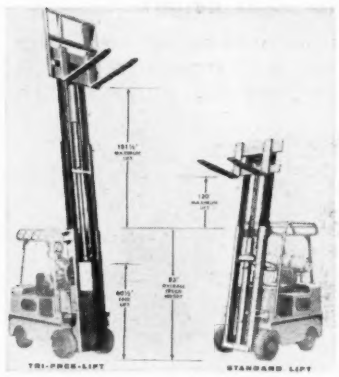
NUMBERING HEADS have integral cams and wheels



Type sizes of 1/16 to 3/16 in. are available from stock in this line of Model 10 numbering heads. Design improvement includes integral wheels and cams, latter being milled directly on the wheel blanks. This construction affords long life, freedom from loosening, and uniform heat treatment because of greater bulk. Made by **Geo. T. Schmidt, Inc.,** 1800 Belle Plaine Ave., Chicago 13, Ill.

▲ For more details circle **NED-789 B8** on enclosed inquiry slip ▲

HIGH LIFT TRUCK MAST has 136½, 145½, and 181½ in. lifts



Now available on all Truck-Man fork lift truck models is the Tri-Free-Lift mast which combines high lift, with low down height, and a very high free lift. Masts with down heights of 68, 71, and 83 in. have respective lifts of 136½, 145½, and 181½ in. Maximum free lift on the three models varies from 45½ to 60½ in. All three masts are offered in 4000, 5000, or 6000 lb capacities at 24 in. load center. The same truck can be used to load truck trailers and box cars, or stack in the warehouse. Photo compares lift, free lift and minimum down height of the Tri-Free-Lift with those of a conventional mast. Made by **Knickerbocker Co.,** Truck-Man Div., 627 Liberty St., Jackson, Mich.

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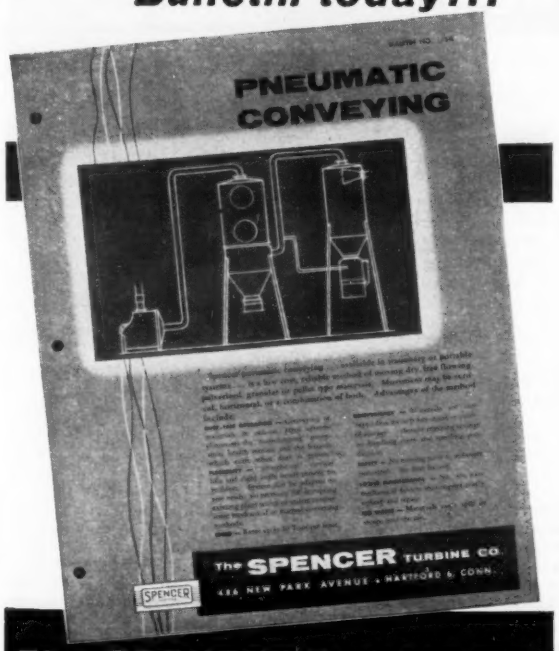
Request this NEW Bulletin today...



The SPENCER Turbine Co.

486 NEW PARK AVE. • HARTFORD 6, CONN.

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feature for feature...

THIS NEW SQUARE D VOLTAGE TESTER

Tops them ALL!

for further details, write Square D Company, 6060 Rivard Street, Detroit 11, Michigan

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

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"One man with hammer" quickly assembles Ackermann BAND-BOX

PATENT APPLIED FOR

1. *Band-Box components nest on space-saving pallet.*
2. *Two sides go into place in first assembly step.*
3. *Third side is added. Clip fastener holds sides securely.*
4. *Stack-Lock Corners fasten to sides, completing assembly.*

Here's the ideal solution to shipping and storage problems. It's the Ackermann Band-Box, a collapsible, steel shipping container that assembles with clips quickly, positively —*without rushing!*

Stack it—it's self-palletizing. *Ship it*—it's strong, rugged. *Store it*—it's painted, bonderized, available with full cover. Can be knocked down quickly and parts nested for fast return. For full details on the Band-Box (with Stack-Lock Corners, as shown, or full cover), contact Ackermann Manufacturing Company, (Subsidiary of Wheeling Steel Corporation), Wheeling, West Virginia.

IT'S WHEELING STEEL

WHEELING STEEL

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This AIR PRESS has positive, exact depth stops

Many job changes can be made by quick, simple stop nuts, without touching column adjustment. Rigid, solid steel column, and heavy surface-ground base.

One of nine sizes and models in the great dependable Mead Air Press line.

THE MEAD MAN CAN HELP YOU CUT COSTS Now!

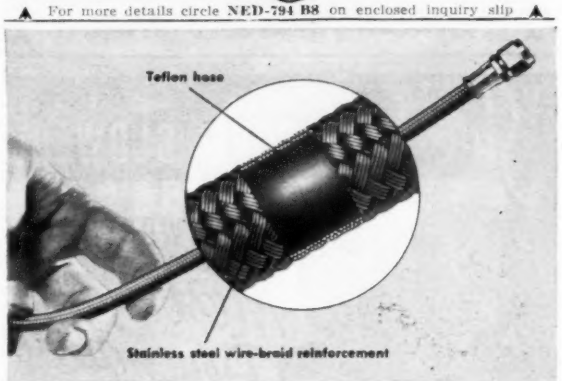
Write for complete information!

MEAD SPECIALTIES COMPANY

PATHFINDER IN AIR POWER AUTOMATION

4114 N. Knox Ave. Dept. NA-28 Chicago 41, Ill.

For more details circle NED-794 B8 on enclosed inquiry slip



TEFLON HOSE FOR TOUGH NEW PROBLEMS

This is American's new *Teflon** flexible hose. Heat-resistant, corrosion-proof, lightweight, it offers the double advantage of economy and longer life in tough industrial jobs—where lines are subjected to outdoor exposure or attack by chemicals, or where high temperatures are a factor—and in aircraft, guided missiles and atomic energy fields. Typical applications: fuel lines, oxygen lines, hydraulic lines and others.

BULLETIN TF-100 gives full information. For free copy, write: The American Brass Co., American Metal Hose Div., Waterbury 20, Conn.

*DuPont trademark for its tetrafluoroethylene resin. 57201

WHEREVER CONNECTORS MUST MOVE **AMERICAN** Flexible Metal and Teflon Hose and Tubing

an **ANACONDA**® product

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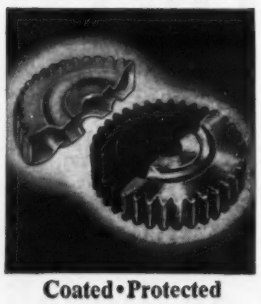

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DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples

Fidelity Chemical Products Corp.
479 Frelinghuysen Avenue, Newark 5, N. J.

For more details circle NED-796 B8 on enclosed inquiry slip

FLASHING SAFETY LIGHT
has operating life of 1500 hours

Transistor circuit of this Big Beam Model 410T Transista Flash safety light affords 1500 hours of continuous operation from two standard 6-v batteries. Weatherproof and corrosion resistant, it has two-directional flashing head with either red or white plastic lenses. Light flashes 72 times per minute for in-plant warning, signal, barricade, or outdoor use. Concealed switch is tamperproof. Made by **U-C-Lite Mfg. Co.**, 1052 W. Hubbard St., Chicago 22, Ill.

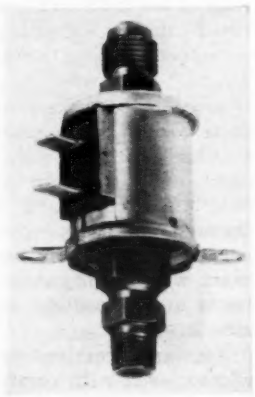
For more details circle NED-797 B8 on enclosed inquiry slip

VOLTMETER KIT
vacuum tube unit has 14 ranges

Model V-70 vacuum tube voltmeter in kit form has seven dc and rms ac ranges up to 1500 v, seven peak-to-peak voltage ranges up to 4000 v, and seven ohmmeter ranges up to 1000 megohms. The $7\frac{1}{2}$ x $5\frac{3}{8}$ x $4\frac{1}{2}$ in. unit has a 5-in. acrylic-cased Pace meter and a steel cabinet. Accessories include an RF crystal probe for high frequency measurements and a high voltage probe for testing power supplies up to 30,000 v. Price is $31.50. Made by **Paco Electronics Co.**, 70-31 84th St., Glendale 7, L. I., N. Y.

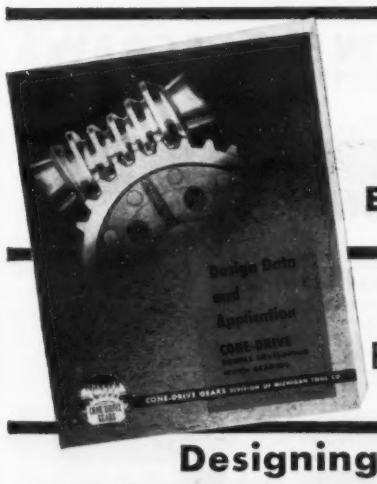
For more details circle NED-798 B8 on enclosed inquiry slip

SMALL SOLENOID VALVE
for water, oil, and air lines



Resistant to moisture and suitable for service involving air, water, or oil as well as most edibles and corrosives, this miniature solenoid-actuated valve is relatively low in cost. Optional constructions include Monel and stainless steel parts, and a variety of end fittings. Features include straight-through flow, epoxy resin encapsulated solenoids, and compact design. Made by **Robertshaw-Fulton Controls Co.**, Fulton Sylphon Div., Box 400, Knoxville 1, Tenn.

For more details circle NED-799 B8 on enclosed inquiry slip



FREE to Design Engineers

New Bulletin 200

Designing WORM GEARS

24 pages of technical data and formulae with step-by-step instructions on the design and application of Cone-Drive double-enveloping worm gearing.

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DIVISION MICHIGAN TOOL COMPANY
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Easily lifts loads up to 10 tons – to heights from 26" to 42" — for production handling. Hydraulically operated through foot pump or electric operation controlled by foot switch, or push button. With or without wheels. Write for prices and bulletins. For information on our complete line write us or our nearby representative.

"Weld-Bilt" PRODUCTS

Hydraulic Lift and Pallet Trucks — Automatic and Portable Elevators — Conveyors — Drum Elevators — Skids — Special Equipment.

WEST BEND EQUIPMENT CORP.
MATERIALS HANDLING ENGINEERS
311 WEST WATER STREET • WEST BEND, WIS.

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EXCLUSIVE **GITS MATCHED-SET AIR LINE LUBRICATION**

To meet modern industry's growing demand for better air line lubrication, this complete "matched-set" line of Air Line Lubricators, Filters and Regulators offers an exclusive combination of important advantages, including:

REDUCED INVENTORY. Only 1 size handles any air line in the plant up to ¾" pipe size.

INSTANT MONITORING by Gits Mist-a-Dome.

MINIMUM PRESSURE DROP, regardless of volume of air: a result of Gits By-Pass Valve.

FLEXIBILITY. Can lubricate from ¾ to 90 cubic feet of air per minute.

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Pneumatics Division
1833A South Kilbourn Avenue, Chicago 23, Illinois

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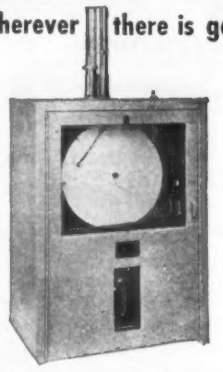

ARCCO-ANUBIS 'Dry-Air GAS GRAVITOMETERS

This new Arcco-Anubis Dry Air Gas Gravitometer determines and records specific gravity of gases automatically corrected to the humidity content of the air. The difference in weight between a column of GAS and equal column of DRY AIR is measured. This ratio represents the true specific gravity of the sample.

One bell of the instrument is filled with gas which is being measured, and the other bell is filled with dry air. Otherwise, except for the new instrument having one column for gas and one column for dry air, the unit is identical in operation to the standard gas gravitometer When calibrated and properly installed, these instruments require little attention other than to wind the clock, ink the pen, and change the chart. Send for bulletin No. 101-R3.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

Available for Early Delivery

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Low-cost ventilation

R&M-HUNTER INDUSTRIAL FAN

For sidewall, penthouse, spot cooling

- 24" to 48" blades
- Effective up to 1/2" static pressure
- Totally enclosed motor
- Easily installed frame
- Streamlined air inlet
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- Automatic shutters

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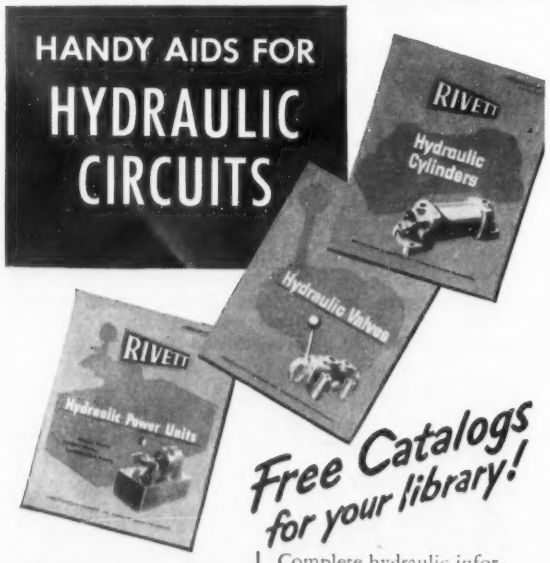
HANDY AIDS FOR HYDRAULIC CIRCUITS



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Complete hydraulic information—easy to use—Simplifies your circuit problems.

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Dept. NED 2 Brighton 35, Boston, Mass.

RIVETT furnishes a complete power package

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SLIP RING ASSEMBLIES
withstand severe environments

Solid coil silver conductors and Pyrex glass inserts for circuit interruption are embedded in a matrix of nonnutrient epoxy plastic, reinforced glass fibers. Conductors are rated for continuous operation at 20 ma, 300 v, with low noise level. Transient voltages to 1500 v are tolerated, and insulation between rings and mounting structure is not less than 5 megohms under specified environments. Rings are designed for operation from −60 to 160°F and altitudes from sea level to 60,000 ft. Vibration, shock, and other requirements are met. Made by **Servonic Instruments, Inc.**, 640 Terminal Way, Costa Mesa, Calif.

For more details circle NED-806 B8 on enclosed inquiry slip

TRUCK CRANE
40-ton capacity, air controlled unit strips easily for highway travel

Easily and quickly stripped for over highway travel, this 500 Series air controlled, 40-ton capacity truck crane features a five-point outrigger system and a

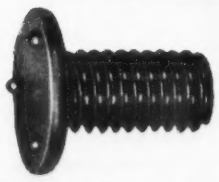
deep section boom. Outriggers which swing out from carrier are located almost directly under rotating base of machine. They permit 360-degree swing with rated capacity. Center, as well as rear and forward outriggers are easily removed to reduce carrier's road weight.

Air controls assure sensitive feel of loads and infinite control at all times. Controlled load lowering, standard on this series, can be connected to either right or left hand drum. It is easily switched in the field. Also standard is controlled boom lowering through sprag type over-running clutch. Speed of engine also controls boom lowering. Retractable high mast, with fleeting sheave on mast top axle for better boom drum spooling, is raised and lowered by engine power.

Four-axle carriers are available in 10 and 9-ft widths, each with comfortable cab. Made by **American Hoist & Derrick Co.**, 65 S. Robert St., St. Paul 1, Minn.

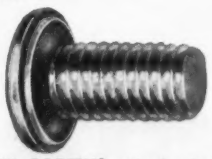
For more details circle NED-807 B8 on enclosed inquiry slip

OHIO WELD SCREWS
THE PRIMARY FASTENERS IN FASTENER ASSEMBLIES

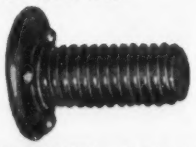


GW SCREWS—Used where design requires a smooth unmarred surface and a fastener permanently fixed in place.

HH SCREWS—Used where a single, button-type projection is required when welding to curved surfaces, to heavy sheet 3/32" or thicker, or to ends of rods.



RW SCREWS—Used where a hermetic seal is required to prevent leakage of air, gas, water, oil or dust, or when welding to perforated metal or wires.



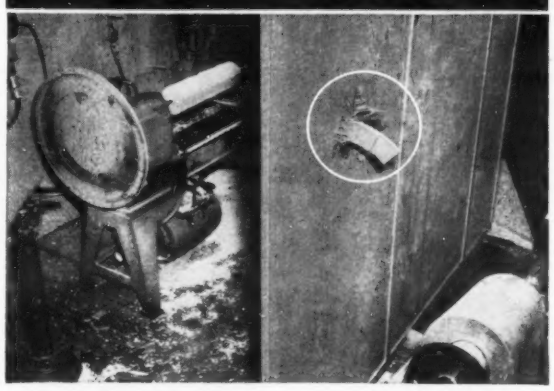
HW SCREWS—Used where a self-locating through bolt is required to be fixed securely in place so that it will not turn and a flush surface is required for attaching mating parts.

Thread Size 6-32 to 3/8-16
OVER 50 YEARS OF BETTER FASTENING
Samples and information available upon request

THE OHIO NUT & BOLT CO.
14 First Avenue • Berea, Ohio

For more details circle NED-808 B8 on enclosed inquiry slip

CUT COSTS with FIR PLYWOOD



Fir plywood safety screen saves life at Douglas Aircraft. Ordered into place by plant safety engineers, this lightweight fir plywood screen stopped a part hurled from a fast-spinning lathe only a few inches from a workman's head. The force was sufficient to have ripped right through lumber, metal or composition panels. Because of its outstanding strength, plywood is ideal for all types of barriers, screens and machinery guards.

Only plywood with DFPA grade-trademarks is made and tested under industry-wide Douglas Fir Plywood Association quality control program. Look for letters DFPA on the panel.

DFPA TESTED QUALITY

Write for New File Folder Catalog
DOUGLAS FIR PLYWOOD ASSOC., DEPT. 181, TACOMA 2, WASH.

For more details circle NED-809 B8 on enclosed inquiry slip

THE Sutton MOTOR DRIVEN PRESSURE BLOWER

THE WORLD'S *Most Dependable* PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USED FOR EXHAUSTING DUST, SMOKE, FUMES, VAPOR . COOLING AND DRYING . . CONVEYING COTTON, WOOL, SHAVINGS . . FORGE BLASTING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY to reduce weight and increase strength. CENTRIFUGAL TYPE. Delivers even, non-pulsating flow of air. Universal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6".

WRITE FOR LITERATURE AND PRICES

Sutton *Manufacturing Corp.*
112 W. WILSON AVENUE NORFOLK, VIRGINIA

For more details circle NED-810 B8 on enclosed inquiry slip

FREE 76-Page Book on Tumbling

Tells you how 4 different TUMBLEX* abrasives assure best results. Describes all TUMBLEX types and sizes, details on barrel-finishing advantages and equipment, advice to operators and facts on Norton sample processing service. Write for copy to NORTON COMPANY, Worcester 6, Massachusetts. G-322

NORTON ABRASIVES *Making better products... to make your products better*

NORTON PRODUCTS: Abrasives • Grinding Wheels • Grinding Machines • Refractories
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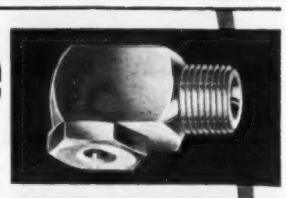
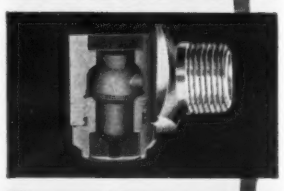
Spray Nozzle types

choice of over 12,000 basic designs



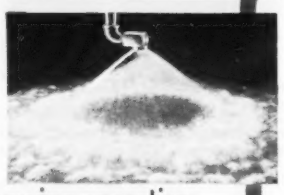
materials

brass, stainless steel, lead, hard rubber, hardened steel, tungsten carbide and many others.



performance

uniform distribution with spray angle, capacity, impact and atomization to your specifications.



to improve every spraying operation

Improve performance, lower spraying costs with Spraying Systems spray nozzles. Prompt delivery. For complete information write for Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH ST. • BELLWOOD, ILL.

ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

▲ For more details circle **NED-812 B8** on enclosed inquiry slip ▲

of Popular General Electric Heaters and Devices

Now you can get popular G-E heaters and devices from stocks near your plant.

NO WAITING: A new General Electric stocking plan means you get quick delivery from local distributors whenever you need the convenience of fast, clean electric heat. Vital equipment can be restored to operation promptly. Favorite "do-it-yourself" heating projects can be completed without delay. You can get the General Electric heater you need—right at the time you need it.

TELEPHONE: Call your General Electric Apparatus Sales office today for the name of your G-E stocking distributor for heaters and devices. Section 723-19, General Electric Co., Schenectady 5, N. Y.

GENERAL ELECTRIC

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You don't know ***IMPORTANT*** *things about Precision Internal Gaging until you know . . .* **COMTORPLUG**

These firms know:

Airesearch Mfg. Co.
Allison Div.
Apex Electrical Mfg.
Bendix Aviation
Buick Motor Div.
Century Electric Co.
Chicago Pneu. Tool
Chrysler Corp.
Continental Motors
Curtiss-Wright
Detroit Transmission
Douglas Aircraft
Fairchild Engine & Airplane Co.
Falk Corp.
Ford Airplane Engine
Ford Motor Co.
General Electric Co.
Hamilton Standard Div.
Harris Seybold Co.
Homelite Corp.
Hughes Aircraft Co.
Int. Harvester Co.
Jacobs Mfg. Co.
Lycoming-Spencer Div.
McDonnell Aircraft
Montrose Div. Bendix
National Lead
Northrop Aircraft
Pontiac Motor Div.
Scintilla Magneto
Steel Products Eng.
Studebaker-Packard
Sylvania (Atomic Div.)
Warner Gear Div.

The full list reads like a "Who's Who" of U. S. Industry!

Unique expanding plug gage shows actual hole size, measures front or back taper, ovality, barrel shape, etc.

⅛" to 10" dia.

Why ***IMPORTANT . . .***

With Comtorplug internal gage you need NO GET-READY program. NO TRAINING needed, NO COMPRESSED AIR LINES, ELECTRONIC GEAR, etc. You get positive AUTOMATIC 2-POINT GAGING within .0001". Shows EXACT hole size. FIXED, not passing, reading. Shows EXACT amount of front or back taper, ovality, barrel shape, etc. Here is truly PRECISION MADE EASY!

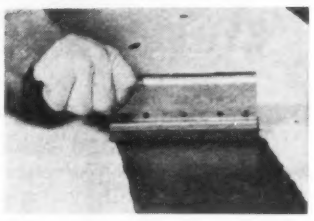
Get important facts, request Bulletin 50.

Comtor Co., 73 Farwell St., Waltham 54, Mass.

REQUEST BULLETIN 50

▲ For more details circle **NED-814 B8** on enclosed inquiry slip ▲

TABLE WIPER
removes chips, abrasive residue



One sweep of the Safety First wiper over machine table surface completely cleans off all chips, cutting fluids, and abrasive residue. Tool consists of an easy-to-grasp metal handle and a 6-in. section of felt. Wiper can be used to clean chips from beneath drill press spindles or milling cutters without exposing user's hand to danger areas, or to insure a clean surface plate prior to parts inspection setup. Wipers cost 75 cents each; less when purchased in quantity. Made by **Henlon Corp.**, Dept. W, Vestal, N. Y.

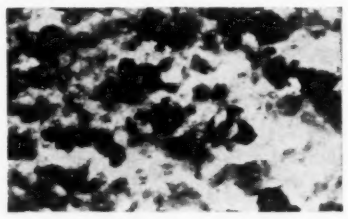
▲ For more details circle **NED-815 B8** on enclosed inquiry slip ▲

PLASTIC DIAPHRAGM VALVE
operates at 300° F

Operating temperature resistance of up to 300° F at 50 psi is featured by this Penton plastic diaphragm valve. Chemical resistance approaches that of glass. Plastic has exceptional dimensional stability through all operating temperature ranges and is compatible with both plastic or metallic piping. Sizes range from ½ through 2 in. with screwed ends only. Handwheel, lever, sliding stem, and air operated types are made by **Hills-McCanna Co.**, 4604 W. Touhy Ave., Chicago 30, Ill.

▲ For more details circle **NED-816 B8** on enclosed inquiry slip ▲

POROUS CERAMIC BODY
retains, gradually releases moisture



Made from a special clay, Vaporlain porous ceramic body is highly porous, yet strong enough to retain its molded shape. Unglazed and glazed types are offered in a selection of colors. Suited for uses where moisture retention for gradual release is necessary, it is applicable to deodorizers, air conditioning equipment, and humidifiers. The photomicrograph shows its surface enlarged 7800 times. Thermal expansion coefficient at 25 to 700° C is 6.9 x 10^{-6}. Bulk specific gravity is 1.24 and water absorption is 40 per cent. Made by **Star Porcelain Co.**, 34 Muirhead Ave., Trenton 9, N. J.

▲ For more details circle **NED-817 B8** on enclosed inquiry slip ▲

NEW Cleveland Vibrator CONVEYOR for Parts Handling

The Cleveland Vibrator Company, Cleveland, Ohio, has announced a new type of vibrating conveyor for handling machined parts, that is powered by an air operated vibrating drive.

The imperceptable vibration of the conveyor moves parts along the tube and speed of movement can be regulated by changing air pressure to the drive mechanism.

One of the chief advantages of the Cleveland Conveyor is that it is self contained. No belting, heavy springing, eccentrics, gears or bulky motors are required. The conveyor is supported on soft springs or rubber mounts.

Cleveland Conveyors will feed at an up-hill angle, as great as 20° depending on conditions. This makes it possible to feed parts from floor level into a portable bin, or to other conveyors.

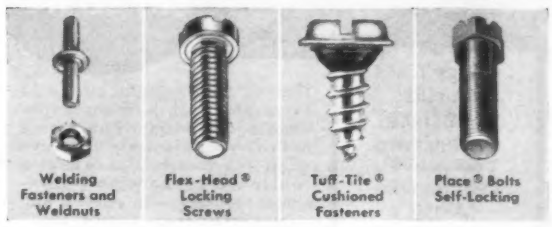
Cleveland Conveyors have only one moving part. There are no bearings, pillow blocks or special stanchions needed. They can be mounted either by pedestal support or overhead suspension.

For complete details, write

THE CLEVELAND VIBRATOR COMPANY
Dept. K2, 2744 Clinton Avenue, Cleveland 13, Ohio

▲ For more details circle **NED-818 B8** on enclosed inquiry slip ▲

Fastening Specialties by NATIONAL Save Time...Trouble



It will pay to make National your one source for standard, specialty or specially designed fasteners. Write today for National's Special Products booklet, or for information on the fastening specialty that interests you.

THE NATIONAL SCREW & MFG. CO. • CLEVELAND 4, OHIO
Pacific Coast: National Screw & Mfg. Co. of California
3423 South Garfield Ave., Los Angeles 22, California

National PRODUCTS — Fasteners, Modell Chains, Chester Hoists

▲ For more details circle **NED-819 B8** on enclosed inquiry slip ▲

Protects Metals at Red Hot Temperatures!

UP TO 2200°F

Heatproof Coating Stops Corrosion, Scaling and Oxidation

MARKAL "S-R" Coatings were developed to protect metals, graphite or carbon parts against scaling, corrosion, oxidation, or carbon and hydrogen penetration at temperatures up to 2200°F. MARKAL "S-R" Coatings are excellent for the protection of stacks, radiant tubes, retorts, carburizing grids, mufflers, manifolds, etc.

MARKAL "S-R" Coatings will not peel or crack at high temperatures and are not affected by rapid heating and cooling cycles.

MARKAL Coatings are manufactured in a complete range of types for specific applications. Write for a free copy of Catalog MPC. The **MARKAL COMPANY**, 3053 W. Carroll Ave., Chicago 12, Illinois.

▲ For more details circle **NED-820 B8** on enclosed inquiry slip ▲

roof ventilator

All desired features of more expensive units now in new economy-priced Aerovent Model 53 Power Roof Ventilators! Discharge dust, fumes, heat, moisture! Dampers open and close automatically. Rugged construction and finest workmanship assure dependable all-weather operation! Sizes 12" to 48", with capacities to 41,000 C.F.M. Available for flat, sloped or peaked roofs.

Other power and gravity units for air-supply or exhaust, write for free bulletin 600

Aerovent

Rated in accordance with Standard Test Code and U.S.D.C. Comm. Std. CS178-51.

Aerovent FAN CO. INC.
Ash and Blake Sts. Piqua, Ohio

▲ For more details circle **NED-821 B8** on enclosed inquiry slip ▲

Specify **NAYLOR**
PIPE and PIPE FITTINGS

TO SPEED THE JOB AND CUT COSTS

WATER LINES
AIR LINES
GAS LINES
COMPRESSED AIR LINES
VENTILATING LINES
PROCESS LINES
PNEUMATIC CONVEYORS
SLUDGE LINES
VACUUM LINES
DRAINAGE LINES

Here is a lightweight pipe with extra strength and safety to handle jobs normally requiring heavier-wall pipe. Its exclusive spiral-lock construction acts as a continuous expansion joint—absorbs shock loads, stresses and strains. Sizes range from 4" to 30" in diameter. All types of fittings, fabrications and connections including one-piece Naylor Wedge-lock couplings to speed installation and cut costs. Available in steel, alloys and stainless steel.

Write for Bulletins No. 507 and No. 525

NAYLOR

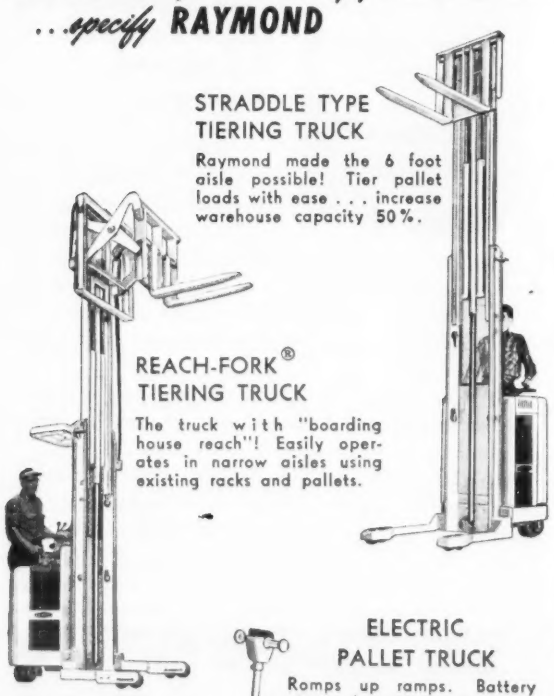
Naylor Pipe Company
1247 East 92nd Street
Chicago 19, Illinois

Eastern U. S. and Foreign Sales Office
60 East 42nd St.,
New York 17, N. Y.

For more details circle NED-822 B8 on enclosed inquiry slip

RAYMOND
PALLET HANDLING TRUCKS

For handling or stacking pallet loads ...specify **RAYMOND**



STRADDLE TYPE TIERING TRUCK
Raymond made the 6 foot aisle possible! Tier pallet loads with ease . . . increase warehouse capacity 50%.

REACH-FORK® TIERING TRUCK
The truck with "boarding house reach"! Easily operates in narrow aisles using existing racks and pallets.

ELECTRIC PALLET TRUCK
Romps up ramps. Battery powered truck for continual pallet handling . . . does the work of 3 hand trucks.

Lightweight
HAND PALLET TRUCK
Most widely-used hand pallet truck in America! Lightweight . . . easy to maneuver . . . hydraulic lift and lower.

Send for Details
The RAYMOND CORPORATION
4156 Madison St., Greene, N. Y.

Send FREE RAYMOND Bulletins:
☐ Lightweight Hand Pallet Truck ☐ Straddle Type Tiering Truck
☐ Electric Pallet Truck ☐ Reach-Fork Tiering Truck

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-823 B8 on enclosed inquiry slip

New Literature and Catalogs

Movable Office Partitions & Paneling

L. A. Darling Co., Workwall Div.—Easy to install, readily moved and rearranged, and attractive in appearance, Workwall system of movable office partitions and paneling is subject of 16-page illustrated Catalog 405. Upright posts of extruded aluminum accept panels in a wide range of sizes and finishes, and also support all types of utility attachments. Latter include table and desk tops, cabinets, shelving, files, book racks, and even flower vases and lighting fixtures. All are described.

For more details circle NED-824 B8 on enclosed inquiry slip

Techniques of Automation

"Automation in Practice" is title of well-illustrated textbook, written by Prof. S. E. Rusinoff. It presents an integrated survey of the latest techniques of automation as they are applied in manufacturing and metalworking industries. Case studies are cited on application of automatic processing in specific plants. Particular emphasis is placed on the potentialities for automation in small and medium-size plants. Price is $6.50. American Technical Society, 848 E. 58th St., Chicago 37, Ill.

For more details circle NED-825 B8 on enclosed inquiry slip

How To Hire & Hold Help

Manpower, Inc.—"100 Suggestions for Hiring and Holding Help" is a 6-page pamphlet which contains helpful suggestions on such management details as advertising for help, sources of procurement, in-plant facilities, treatment of employees, company benefits, and indoctrination of new help. Also outlined are the varied temporary part-time services available from this company.

For more details circle NED-826 B8 on enclosed inquiry slip

Baskets, Racks, & Metal Specialties

Wire & Iron Products Inc.—Illustrated Catalog MS-57 contains 8 pages of descriptions of varied designs of wire parts-handling baskets for conveying and processing of production parts. Also shown are conveyor hooks, plating racks, and many special purpose materials handling items developed by this wire and metal fabricating firm.

For more details circle NED-827 B8 on enclosed inquiry slip

Product Marking Facilities

Gray Pantograph Engraving Co.—"Precision Marking and Fabrication in All Metals, Plastics, and Phenolics" is a 4-page booklet which explains facilities and services offered by this company. They are equipped to perform engraving, phenolic fabrication and marking, screen printing, and printed circuit work.

For more details circle NED-828 B8 on enclosed inquiry slip

Cams for Every Need

American Cam Co.—Special cams in single or production lots are described in illustrated 8-page Bulletin SC-1. Facilities and services offered to produce precision cams to customers' requirements are detailed. Shown are cams designed for aircraft, missile, electronics, and textile industries.

For more details circle NED-829 B8 on enclosed inquiry slip

Heating, Treating, Pelletizing, & Processing

Surface Combustion Corp.—Equipment engineered and manufactured by the pelletizing, steel mill, heat treat, glass, Webster engineering, boiler burner, air conditioning and drying, Janitrol aircraft, and the heating and air conditioning divisions of this company is detailed in 28-page brochure "The Surface Story."

For more details circle NED-830 B8 on enclosed inquiry slip

Pneumatic Controllers

Fischer & Porter Co.—Motion-balance pneumatic controllers with regenerative feedback which act on mechanical or pneumatic signals from processing operations are covered in 12-page illustrated Catalog 53P-4000.

For more details circle NED-831 B8 on enclosed inquiry slip

Materials Handling Aids

Merrill Brothers Co.—16 pages of product pictures, application drawings, tables, engineering data, and selection guidance on lifting clamps, drum openers, hoist accessories, and other materials handling devices are contained in illustrated Catalog C-1.

For more details circle NED-832 B8 on enclosed inquiry slip

AN ANGLE TO REINFORCING

The angle is the "diagonal tie" made on this small, but heavy, box of welding electrodes. This tying technique seals the box securely, and reinforces top, bottom, sides, and ends.

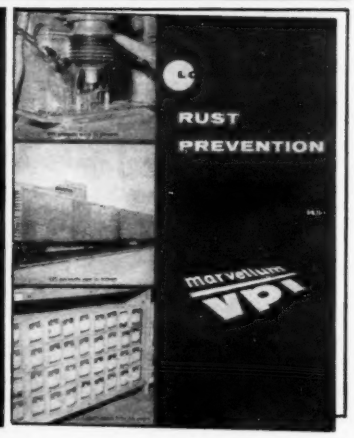
You, too, can apply GERRARD Steel Strapping to your packaging operation. Write NOW for a free copy of USS GERRARD'S new 36-page Blue Book of Packaging.

GERRARD STEEL STRAPPING DEPT., U. S. STEEL SUPPLY DIVISION
4717 South Richmond Street, Chicago 32, Ill.

USS GERRARD
ROUND STEEL **STRAPPING** FLAT STEEL
UNITED STATES STEEL

For more details circle NED-833 B8 on enclosed inquiry slip

HERE IS THE answer TO LOW COST RUST PREVENTION



Write today! for this FREE complete new source of information on Marvellum's VPI Rust preventive papers.

- NON-TECHNICAL
- EASY TO UNDERSTAND
- ACT NOW!

A complete factual guide to the use of VPI

marvellum VPI

THE MARVELLUM COMPANY
11-F Appleton Street
HOLYOKE • MASS.

For more details circle NED-834 B8 on enclosed inquiry slip

Representatives and Distributors in principal Industrial areas.
Ask for a Severance catalog today!

For more details circle NED-835 B8 on enclosed inquiry slip

FOR FASTER • SAFER LOWER COST SERVICING

WITH THOMPSON HANGERS, maintenance of luminaires is an easy hazard-free job for one unskilled man. All work is performed quickly, safely and efficiently at floor level. There is no need for extra manpower, space-consuming scaffolds or costly auxiliary equipment to maintain hi-bay lights at peak efficiency. That is why THOMPSON HANGERS are the most economical and practical means of servicing luminaires mounted 20 feet or more above the floor.

T-E

THE THOMPSON ELECTRIC CO.
P.O. Box 873-F Cleveland 22, Ohio

7860-TE

FOR DETAILS AND PRICES, WRITE FOR NEW BROCHURE TH-57.

For more details circle NED-836 B8 on enclosed inquiry slip

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition.

WATERLOO METAL BOXES AND CHESTS

Write for FREE book, including complete information.

Waterloo

VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

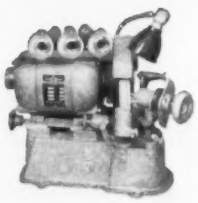
For more details circle NED-837 B8 on enclosed inquiry slip

SAVE DRILLS!

NOW PRECISION DRILL GRINDING BY ANY INEXPERIENCED WORKER!

FOR DRILLS UP TO ¾"...

The BLACK DIAMOND Drill Grinder restores **an old** drill to like-new precision sharpness . . . in 10 seconds! Any inexperienced man (or woman!) is an expert grinder with this unit. Both lips ground at once . . . web-thinning equally simple! Pays for itself many times over!



FOR DRILLS UP TO 2½"...

The WORCESTER Drill Grinder (now manufactured by Black Diamond) sharpens 2, 3, or 4-lip drills, flat, flat twisted or chucking, up to 2½". Clearances are easily and instantly changeable, feeding is controlled by micrometer adjustment

FREE BULLETIN

Get all the facts! 4 page illustrated bulletin gives complete story. Write Today!

BLACK DIAMOND

SAW & MACHINE WORKS 72 NORTH AVE. NATICK, MASS.

For more details circle NED-838 B8 on enclosed inquiry slip

New Processes and Materials

PLASTIC TOOLING METHOD
permits runs to 150,000 stampings

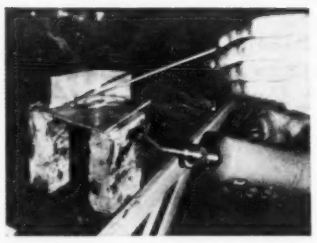
Epoxy-Alloy is a plastic-metal composition which can be used to produce metal forming, secondary operation, Hydroform and rubber pad forming, and stretch

dies and fixtures. Based on an epoxy resin system reinforced with metal or glass fibers and metal fiber flocking, this tooling method permits runs of up to 150,000 stampings where low-gage softer metals are to be formed.

To date, approximately 70 Epoxy-Alloy dies have been put into commercial use. Savings up to 80 per cent in time and 87½ per cent in cost have been reported over conventional metal die methods. Illustration shows production of 4 x 23-in. automobile radiator tanks which were stamped from 0.025-in. brass with a 3-in. depth of draw. Material and process developed by **Bakelite Co.**, Dept. NE, 30 E. 42nd St., New York 17, N. Y.

For more details circle NED-839 B8 on enclosed inquiry slip

METAL JOINING TECHNIQUE
reaction eutectic employed to join dissimilar nonferrous metals



Chemical joining of copper and aluminum is now commercially feasible by a new industrial technique that employs InterAct, a chemical reaction eutectic. Material, under the influence of heat, eliminates surface oxide layer and causes similar and dissimilar nonferrous metals to flow together at heats lower than melting point of either metal being used. It also forms bond through ion exchange between magnesium, titanium, brass, zinc, silver, and gold.

InterAct is offered in ⅛-in. OD coiled wire form for T and butt jointing, in powder form for joining broad areas of contact, and in granule form for joining foils and other materials with large surfaces at lowest possible temperatures. Material lends itself to automated, industrial conveyor techniques involving use of a torch, 810° F furnace, and standard welding gun, or using strip heaters along with preformed wire coils. Photo shows two pieces of aluminum being joined by introducing wire into joint of pieces torch heated to 810° F. Developed by **Intertectics, Inc.**, Dept. NED, Northfield & Forbes Rd., Bedford, Ohio.

For more details circle NED-840 B8 on enclosed inquiry slip

ALUMINUM PAINT
decorates, insulates, waterproofs

Luma-Tint heat-reflective aluminum paint is available in colors for application to roofs and siding of almost any type of construction. It combines light and heat reflection with sealing and waterproofing properties. Eight outdoor colors are available. Application can be over asphalt and asbestos shingle roofs and siding, built-up composition roofing, tar paper, cinder and cement block, concrete, corrugated steel, sheet metal, weathered galvanized surfaces, slate, and stucco. Paint is applied by brush, spray, or other coating method, drying to the touch in 1½ to 2 hours. Made by **James B. Sipe & Co.**, 120 Vanadium Rd., Pittsburgh 16, Pa.

For more details circle NED-841 B8 on enclosed inquiry slip

Cut out and mail. No Postage Needed

FREE ... Chart

This conversion chart is amazingly useful for engineers, shop men and for other executives. Included are common conversions such as inches to centimeters or watts to H.P. as well as many conversions that are difficult to locate in reference manuals. Use this post-paid reply card or your letterhead to request your free chart (limit one to a person). This chart is our gift to you; no salesman will call. Our current catalog will be sent with chart.

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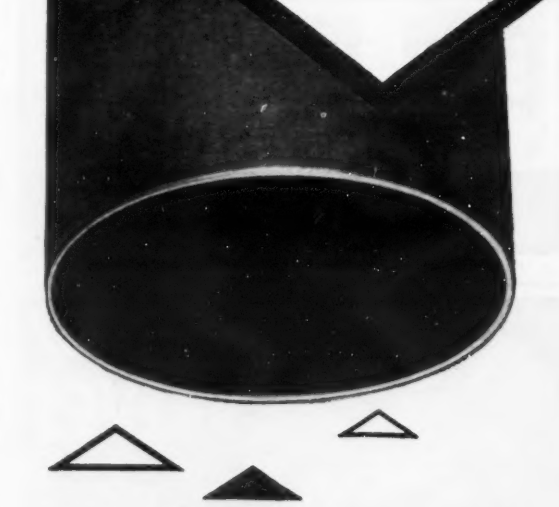
CHICAGO 40, ILLINOIS

For more details circle NED-842 B8 on enclosed inquiry slip

BELIEVE IT OR NOT

this tube end just left the Patented WALLACE Combination Cutting and Deburring Machine!



Cuts like this in seconds!

. . . and you can do it in your own shop for lowest ultimate cost.

• WRITE for our 44-pg. Wallace Cut-Machining book on cutting machines. 8 types tubes to plates.

1958 Edition of "A MANUAL OF PROCESSES"

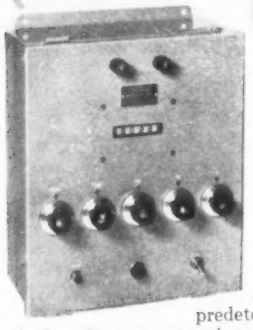
Cutting and bending. 200 pages — 148 illustrations. Answers thousands of troublesome shop questions. $3.00 plus 30¢ mailing cost. Send cash and save 30¢ postage.

ORDER TODAY!

WALLACE SUPPLIES MFG. CO.
1312 W. Wolfram St. • Chicago 13, Illinois

For more details circle NED-843 B8 on enclosed inquiry slip

NEW ELECTRIC PREDETERMINING COUNTER



for remote operation of machines, processes, materials handling

This Veeder-Root automatic predetermining control device offers, in a single unit, new convenience and flexibility in the solution of machine and process control and materials handling problems.

Predetermining control units can be grouped in a single central location for convenient setting of the predetermined quantities and visual monitoring of the accumulated counts. Additional ease of operation is afforded by the two-second duration electric reset which allows completely automatic recycling, automatic reset in preparation for the following cycle, or push button reset whenever desired. For full details, write:

VEEDER-ROOT INC.
HARTFORD 2, CONNECTICUT
Hartford, Conn. • Greenville, S. C. • Altoona, Pa. • Chicago
New York • Los Angeles • San Francisco • Montreal
Offices and Agents in Principal Cities

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Bathey BINS

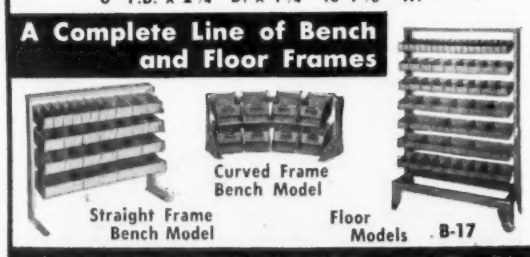
FOR SMALL PARTS ASSEMBLY AND STORAGE . . .

Independently suspended bins with parts visible. Saves time and money.

STO-BINS
5 SIZES
6" F.B. x 2¾" D. x 1¾" to 11⅛" W.

FLO-BINS
3 SIZES
6" F.B. x 2¾" D. x 1¾" to 7⅜" W.
Pat. Pending

A Complete Line of Bench and Floor Frames



Straight Frame Bench Model
Curved Frame Bench Model
Floor Models B-17

BATHEY MFG. CO.
100 S. MILL STREET PLYMOUTH, MICH.

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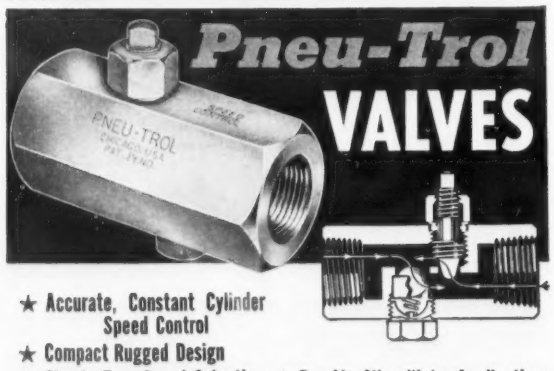
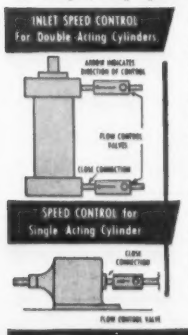
Pneu-Trol VALVES



★ Accurate, Constant Cylinder Speed Control
★ Compact Rugged Design
★ Simple, Easy Speed Selection ★ For Air, Oil or Water Applications



Pneu-Trol Speed Control Valves, are widely used in hundreds of control applications because they combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to its seat, requiring only a slight differential pressure to fully open or close it.

Needle design permits maximum flow capacity in the controlled direction. Metal to metal needle and ball seats insure long trouble-free service. Simple, practical "O" gland structure eliminates troublesome leaking. Valve bodies machined from hex brass or aluminum for 2000 psi working pressures; steel and stainless steel for 5000 psi. Made in 5 female pipe sizes—⅛" to ¾". ATTRACTIVE PRICES . . . IMMEDIATE DELIVERY.

Write for illustrated circular and prices.

Pneu-Trol DEVICES, INC.
1432 N. KEATING AVENUE • CHICAGO 51, ILL.

▲ For more details circle **NED-846 B8** on enclosed inquiry slip ▲

New Literature & Catalogs

Asbestos Sheet Packing & Gaskets

Durabla Mfg. Co.—Homogeneous compressed asbestos sheet packing and gaskets can withstand the 120 chemicals listed in 8-page illustrated bulletin. Tables give stock sizes of sheets in five gages as well as prices and dimensions of gaskets for various flanges and fittings.

▲ For more details circle **NED-847 B8** on enclosed inquiry slip ▲

The Ballizing Process

Industrial Tectonics, Inc.—The ballizing process—forcing a ball through a part for hole sizing and/or finishing—is explained in 16-page illustrated Catalog BZQ-11 entitled, "New Dimensions in Ballizing." Typical applications are described, and tables give performance, production, and cost data. Line of equipment covered will size holes at rate of up to 4500 hourly.

▲ For more details circle **NED-848 B8** on enclosed inquiry slip ▲

Elastomeric Adhesives Facilities

Johns-Manville Sales Corp., Dutch Brand Div.—Recently expanded elastomeric adhesive production facilities of this company are described in 10-page booklet entitled "Adhesives." Dutch Brand can now supply solvent-based, solvent-based pressure-sensitive, and solvent-activated adhesives in volume. The operation is described in detail.

▲ For more details circle **NED-849 B8** on enclosed inquiry slip ▲

Heat Treating

Leeds & Northrup Co.—Tricarb heat treating method described in 12-page illustrated folder features Microcarb atmosphere control, Speedomax temperature control, and a controlled quench. With new L-O voltage heaters, the equipment can be used interchangeably for controlled case carburizing, carbonitriding, and other processes. Equipment specs are included.

▲ For more details circle **NED-850 B8** on enclosed inquiry slip ▲

Preventing Industrial Dermatitis

Huntington Laboratories—"The Prevention of Occupational Skin Diseases" is title of booklet written by Dr. L. Schwartz, retired medical director of U. S. Public Health Service, especially for industrial management and those charged with public health and safety. Booklet emphasizes preventive measures in fighting industrial dermatitis.

▲ For more details circle **NED-851 B8** on enclosed inquiry slip ▲

Petrochemicals for Industry

Amoco Chemicals Corp.—Line of petrochemicals for paint, plastics, rubber, chemical, petroleum, detergent, agricultural chemical, and other industries is described in 24-page general product brochure. Tables of typical properties are included.

▲ For more details circle **NED-852 B8** on enclosed inquiry slip ▲

Optical Aids for Industry

Edmund Scientific Co.—Over 1000 optical items are described in 80-page illustrated optical catalog. Included are measuring magnifiers, microscopes, pocket comparators, hand spectroscopes, reticles, mirrors, telescopes, binoculars, and many other items.

▲ For more details circle **NED-853 B8** on enclosed inquiry slip ▲

Mechanical & Hydraulic Lift Trucks

Association of Lift Truck & Portable Elevator Manufacturers — Basic understanding of the part played by mechanical and hydraulic hand lift trucks in industrial material handling systems is provided by 16-page brochure. It describes and illustrates skid and pallet type trucks and reviews the basic principles of lifting mechanisms.

▲ For more details circle **NED-854 B8** on enclosed inquiry slip ▲

Adhesives, Sealants, & Paint Specs

Magic Chemical Co.—Government specification number is given for each adhesive, sealant, paint, enamel, varnish, cleaner, solvent, and other product made by this company in 11-page Form 75A. Corresponding company product name and company product number are also given.

▲ For more details circle **NED-855 B8** on enclosed inquiry slip ▲

Transistors

Kahle Engineering Co.—Specifications for 489 transistors now available are found in this "1958 Transistor Data Chart." Included are over 170 new types introduced in recent months. Application data are also included. Its 8 pages cover products made by 23 companies.

▲ For more details circle **NED-856 B8** on enclosed inquiry slip ▲

Loosens rusty nuts, bolts, couplings

SAVES **Time** • SAVES **Labor**
SAVES **Expense of Broken Parts**

- Quickly cuts rust, gummed-up oil and grease, hardened paint
- Penetrates the tightest places. Tasgon comes in handy "tool-kit-size" 3 ounce cans; pints, quarts and gallons. Send for sample.

the **penetrating** rust solvent

Samuel Cabot

SAMUEL CABOT INC.
232 Oliver Bldg., Boston 9, Mass.

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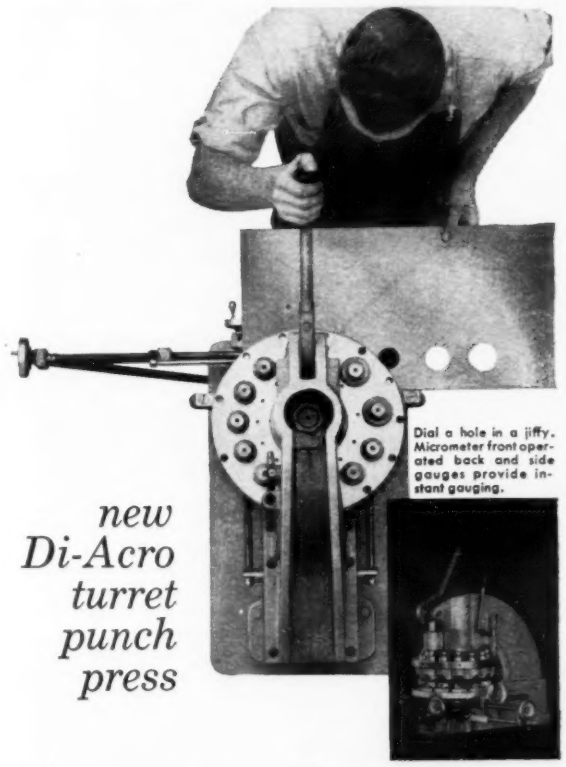
Dial a hole in a jiffy. Micrometer front operated back and side gauges provide instant gauging.

new Di-Acro turret punch press

Accurate Burr-Free Punching at 12 Rotating Stations

The new Di-Acro 4 Ton Turret Punch Press provides rapid, close tolerance punching of round, square, oval and rectangular holes from 1/16" to 2".

Rotating turrets provide rapid indexing for single or sequence punching. Precision hole location quickly obtained with Micro-twin gauges. Punches sheet metals up to 16 gauge mild steel, fibreboard, asbestos, paper, cork, leather, rubber, plastic and other sheet materials.

Dies are mounted in turrets—always handy. Standard clearance between punch and die is .002". Choice of 6 other clearances at no charge. The Di-Acro Turret Punch Press is safe, simple to operate—requires little maintenance.

Consult the Yellow Pages of your phone book for the name of your Di-Acro distributor or write us for catalog describing this and other Di-Acro machines.

pronounced die-ack-ro

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MFG. CO.
354 8th Avenue • Lake City, Minn.

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FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from 1/8 pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *100 Cambridge St., Burlington, Mass.*

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Series H-Capacities from 2000 to 50,000 Pounds

EUCLID HOISTS

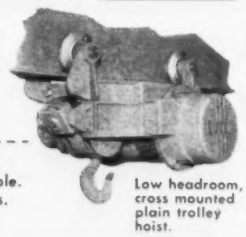
for Dependable Service

These hoists are highly efficient and strictly modern in every detail with oversize anti-friction bearings and heat treated steel parts in combination with a welded frame.

The planetary gearing and mechanical load brake are mounted in oil tight housings. The hoist gearing is assembled in the hoist drum.

This design produces an unusually compact, rugged and accessible hoist readily adapted to various installations and types of control.

Write for Literature



Low headroom, cross mounted plain trolley hoist.

Various other standard and special heavy duty hoists available. Write regarding your requirements.

THE EUCLID CRANE & HOIST COMPANY

1362 CHARDON ROAD • CLEVELAND 17, OHIO

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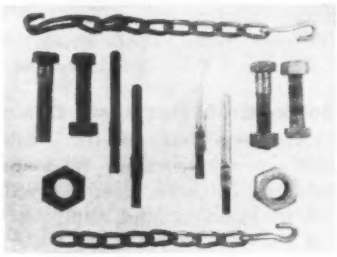
New Processes & Materials

CORROSION PREVENTIVE
removes rust and protects metal



Only surface preparation required prior to treatment of metal products with Farrellok corrosion preventive is removal of oil and grease. This protective coating removes the rust and protects the metal in a single operation. It combines with the metal to form a ductile phosphatized coating which is an excellent paint base. It can be applied hot or cold, by dipping, spraying, or brushing. It is noninflammable. Price is $4 per gal. Made by **Farrelloy Co.,** 1246 N. 26th St., Philadelphia 21, Pa.

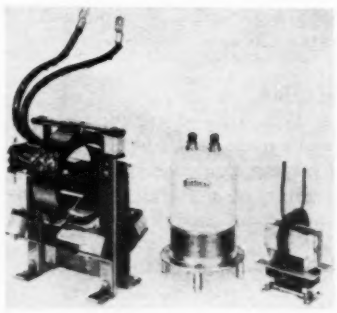
▲ For more details circle **NED-862 B8** on enclosed inquiry slip ▲

MARBLE & STONE ADHESIVE
also bonds metals to stone

Mending, filling, and bonding marble or stone to each other or to wood and metal materials is possible with ARC-Kleer transparent glue. Easily colored with mineral or paint pigment to hide the mend, glue has comparative strength of a weld and requires no reinforcing rods to strengthen the joint. Used as a marble filler, adhesive can be honed and polished to perfect slab finish. Consistency is regulated by adding plaster of paris, and hardening time is controlled with use of appropriate hardener. Developed by **American Resin Corp.,** Dept. NED, 3215 N. Sheffield Ave., Chicago 13, Ill.

▲ For more details circle **NED-863 B8** on enclosed inquiry slip ▲

PERFLUORINATED LIQUIDS
mixed with certain gases for cooling and reducing weight of transformers



High thermal expansion coefficients, high heat capacity, electrical properties similar to transformer oils, low dielectric constants, relatively high dielectric strength, corona - inhibiting properties, and volatile character are features of perfluorinated compounds, now being used in electronic transformers as heat transfer agents. They have good stability at temperatures up to 200° C. End result from their transformer application is units with considerable reductions in bulk and weight.

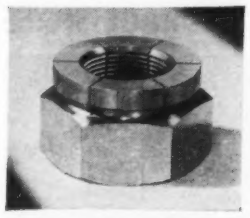
Certain gases can be used with selected perfluorinated liquids to minimize internal pressures caused by high expansion coefficients and volatility. These features favor transfer of heat by evaporation and condensation. Fluorochemical vapors, which approach oil in cooling effect with natural convection, are expected to bring about additional weight reductions. Photo shows construction details which exhibit reduction of standard Raytheon transformer (left) to one-quarter size (right) through use of fluorochemical FC 43. Available from **Minnesota Mining & Mfg. Co.,** Dept. NED, 900 Bush St., St. Paul 6, Minn.

▲ For more details circle **NED-864 B8** on enclosed inquiry slip ▲

SEVERE-DUTY VARNISH
protects against heat and corrosion

Metals and other materials are guarded from severe heat and corrosion hazards by Maraset BV-790 clear varnish. The severe-duty metal-baking resin adheres firmly to clean, dry surfaces on which it is brushed or sprayed. After a 20-min or longer heat cure, it sets to form a thin, but tough and flexible coating that resists abrasion and chipping. Chemical resistance is maintained from −60 to 200° C. Application can be to cans, drums, brass and other hardware, cosmetic containers, and appliances. Its dielectric strength suits it for use as an insulating coating on electrical and electronic components. Made by **Marblette Corp.,** Dept. NED, 37-31 30th St., Long Island City 1, N. Y.

▲ For more details circle **NED-865 B8** on enclosed inquiry slip ▲



Flexloc self-locking nuts

protect assemblies, cut maintenance

Use FLEXLOC lock and stop nuts wherever bolted connections are needed; wherever exact adjustments must be made and held; wherever predetermined play or gap is required; wherever vibration and impact occur. They won't work loose, they protect assemblies, reduce maintenance. And the 1-piece, all-metal construction speeds assembly by eliminating such auxiliary locking devices as double nuts, cotter pins and washers.

FLEXLOC self-locking nuts—in sizes from #0 to 2 in., and in alloy steel, brass, aluminum, and stainless steel—are stocked by industrial distributors. Ask your authorized FLEXLOC distributor for complete information. Or write Flexloc Locknut Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

SPS Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co., Inc. • Nutt-Shel Corporation • SPS Western • Standard Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle **NED-866 B8** on enclosed inquiry slip ▲

At Last

HOBBS ONE STOP

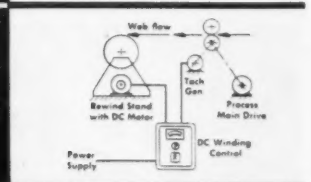
Complete Winding Service

No more shopping around, no more fitting unrelated components together! Now you get one complete winding "package", all from one source — engineered, built and installed to your special requirements by the originators of "Engineered Winding". You save from the start and you *keep on saving* with a Hobbs Engineered Winding Package.

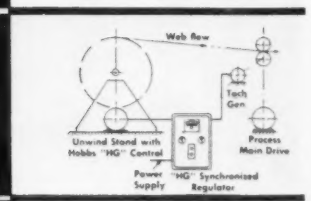
THE AMERICAN MADE STANDARD LINE OF HOBBS ALQUIST WINDERS

American Made Alquist Winder With Blower and Gear Reducer Mounted

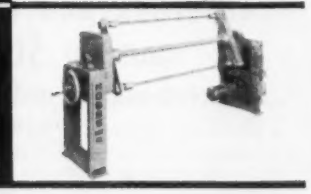
SPECIAL HOBBS WINDERS FOR FEED BACK CONTROL AND IN PROCESS SYNCHRONIZATION



HOBBS UNWIND UNITS FOR IN PROCESS SPEEDS OR 0 STARTS



HOBBS STANDS BUILT TO FIT YOUR WINDING OPERATION



702-7

Send for special Hobbs Winding Analysis Sheet. Find exactly how and where Hobbs can save you time and money.

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Branch Offices and Representatives in Irvington, N. J., Chicago, Cleveland, Greenville, S. C. and Toronto, Canada

WINDERS • HAND & POWER SHEARS
SLITTERS • DIE PRESSES • CORNER CUTTERS

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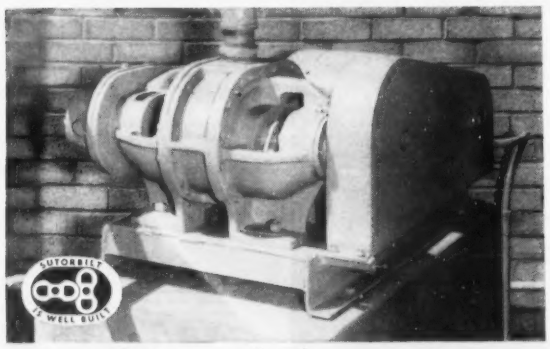
▲ For more details circle NED-869 B8 on enclosed inquiry slip ▲

▲ For more details circle NED-870 B8 on enclosed inquiry slip ▲


Consulting and Plant Engineers look to SUTORBILT

...for solutions to air and gas handling problems

A 5HXB vacuum pump at the Sunnyvale, California, Sewage Treatment Plant is typical of many in use today. It is used to handle sewer gas from the gasometer at the Waukesha engines.

Sutorbilt is ready to put more than 26 years of experience in manufacturing rotary positive blowers, gas pumps, and vacuum pumps to work for you. Standard units are available in capacities up to 30,000 CFM and pressures or vacuums up to 12 psig. (S-7 4286)

Write for the name of the representative nearest you, or check the yellow pages of your local telephone directory.

SUTORBILT CORPORATION
SUSIDIARY OF FULLER COMPANY • CATASAUQUA, PA.
P. O. Box 269 • 2966 E. Victoria St. • Compton, Calif.
▲ For more details circle NED-871 B8 on enclosed inquiry slip ▲

New Literature & Catalogs

Controlling the Coffee Break

Interstate-United Coffee Corp.—8-page color-illustrated brochure on the Perk-O-Fresh coffee vending machine explains to administrative heads a time and money saving way to control coffee breaks, and at the same time, satisfy employee coffee hunger.

▲ For more details circle NED-872 B8 on enclosed inquiry slip ▲

Solenoids & Electronic Components

Anderson Controls, Inc.—Solenoids, coils, and electronic components are detailed in illustrated enlarged catalog. Pictures, charts, graphs, and technical data aid in selecting and applying these items.

▲ For more details circle NED-873 B8 on enclosed inquiry slip ▲

Guide to Hydraulic Fluids

Vickers Inc. — 24-page illustrated Bulletin No. 1300SA is entitled "Selection, Operation, and Maintenance of Hydraulic Fluids for Industrial Machinery." It describes the desirable and undesirable characteristics of petroleum base and fire resistant hydraulic fluids. Trouble shooting tips are cited. Also covered are such subjects as viscosity recommendations, prevention of rust and corrosion, connections and leaks, filters and strainers, and preventive maintenance.

▲ For more details circle NED-874 B8 on enclosed inquiry slip ▲

Stitching Metal to Metal

Acme Steel Co.—Over 25 pictures and 50 drawings are used to show how to stitch metal to metal or metal to nonmetallic materials. Increased production and lower materials costs are reported for various operations. Described are various models of stitching machines. Ask for booklet "Metal Stitching, A New Idea in Fastening."

▲ For more details circle NED-875 B8 on enclosed inquiry slip ▲

Hand Screw Machine

Rockwell Mfg. Co., Delta Power Tool Div.—6-page fold-out bulletin gives design and performance information on the new Delta hand screw machine which has a bed turret with six stations. How a standard Delta 11-in. lathe can be converted into a hand screw machine with accessories is explained.

▲ For more details circle NED-876 B8 on enclosed inquiry slip ▲

Expanded Metal & Grating

Joseph T. Ryerson & Son, Inc.—Expanded metal, the material of a thousand uses, is subject of 8-page technical reference and buying guide. Expanded metal can be supplied in range of materials and mesh sizes. Sizes, air flow, and load capacities are listed in Bulletin 20-4.

▲ For more details circle NED-877 B8 on enclosed inquiry slip ▲

High Production Presses

Niagara Machine & Tool Works—24-page illustrated Catalog 264 presents operating data and design details of the new Series SA-2 two-point, straight-side, automatic presses which incorporate automatic coil feeding as well as press-mounted controls and devices.

▲ For more details circle NED-878 B8 on enclosed inquiry slip ▲

Electric Heating Units & Devices

Westinghouse Electric Corp.—A wide variety of electric heating units including strip, oven, immersion, and bolt heaters as well as industrial hot plates are described in 24-page illustrated Catalog 27-620. Heating problems and their solutions are discussed with the aid of graphs and charts in the booklet's "Heater Selection Guide."

▲ For more details circle NED-879 B8 on enclosed inquiry slip ▲

Automatic & Limit Controls

Assembly Products, Inc.—Data on Versatrol simple all-purpose electrical controls for use with virtually any detectable variable are presented in 12-page illustrated Bulletin 106. Applications of the device using the more common circuits, both automatic and limit, and including the new Load Sentry overload control, are explained. Trip points are adjustable, and there is a continuous signal.

▲ For more details circle NED-880 B8 on enclosed inquiry slip ▲

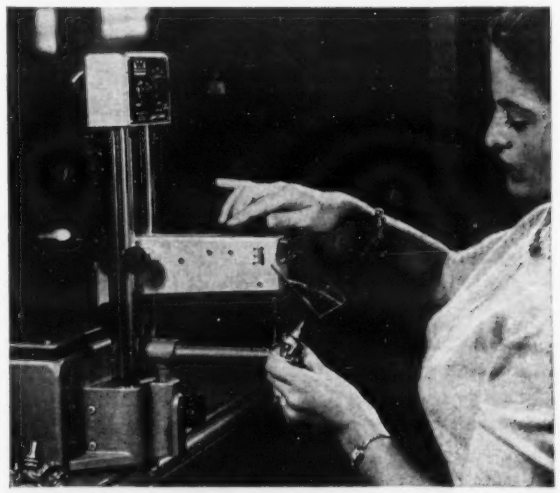
How To Make Root Pass Welds

Arcos Corp.—Information on how to obtain a sound root pass weld with the aid of a consumable insert when only one side of weld is accessible is contained in 12-page Booklet 9574. Fifteen different insert compositions are classified for welding carbon steels, austenitic stainless steels, nonferrous alloys, and chrome-moly and chrome steels.

▲ For more details circle NED-881 B8 on enclosed inquiry slip ▲

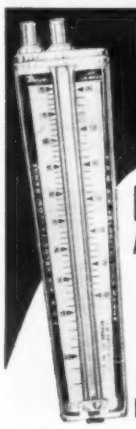
▲ For more details circle NED-882 B8 on enclosed inquiry slip ▲

▲ For more details circle NED-883 B8 on enclosed inquiry slip ▲


NOW—WELD THAT PRECISION ASSEMBLY

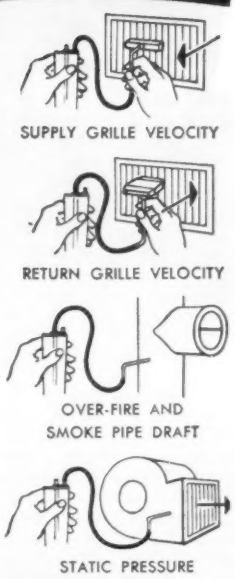
If you're joining metals from .0002 to .060 in size, you, too, can enjoy the speed, simplicity, reliability, and economy of Weldmatic welding. Write for complete technical data. Weldmatic Model 1015 illus. Delivery from stock. PRICE $675.00 F.O.B. Pasadena

WELDMATIC
DIVISION OF UNITEK CORPORATION
271 North Halstead Avenue, Pasadena, California
Sales engineering representatives in principal cities
▲ For more details circle NED-884 B8 on enclosed inquiry slip ▲



NEW NO. 460 AIR METER BY Dwyer

NOW AN ALL-PURPOSE LOW-COST INSTRUMENT FOR STATIC PRESSURE AND AIR VELOCITY MEASUREMENTS



High *and* low ranges give direct velocity readings from 260 to 4000 fpm., static pressure readings from .005 to 1.0 inches of water. A complete instrument kit with every accessory needed for adjusting and balancing air conditioning, heating and ventilating equipment. The entire kit will fit in your shirt pocket.

WRITE FOR BULLETIN B-9

F. W. DWYER MFG. CO.

P. O. BOX 373-Q MICHIGAN CITY, INDIANA

For more details circle NED-885 B8 on enclosed inquiry slip

IF YOU USE SAWS GET THIS FREE BOOK

This free book is based on facts and experience from many years' use of Foley precision saw filing equipment in thousands of plants. It contains pictures and helpful data showing how firms have actually increased sawing production 25% to 40%, lengthened saw life, reduced breakage, produced better work, and have lowered maintenance costs. One firm reports an annual saving of $350. Book includes instructions illustrating how automatic sharpening can benefit you. Request Manual No. 100—no obligation.

56 helpful pages

FOLEY MANUFACTURING CO.

3323 N. E. 5TH ST. • MINNEAPOLIS 18, MINN.

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STOP SLIPPING ACCIDENTS ON RAMPS

A.W. ALGRIP on ramps provides super-safe footing—under the *most hazardous* slipping conditions!

ALGRIP, world's only abrasive rolled steel floor plate, is made by a patented process in which a grinding-wheel type abrasive has been rolled—not coated to a controlled depth as an integral part of tough steel. The abrasive particles provide maximum traction, unaffected by oil, grease or water. Usage merely exposes more abrasive.

Make a test installation. ALGRIP fabricates easily—requires no maintenance—will pay for itself in accident and insurance reductions.

For complete information write on company letterhead to Dept. AL-E28.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY

Conshohocken, Pa.

Other Products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

For more details circle NED-887 B8 on enclosed inquiry slip

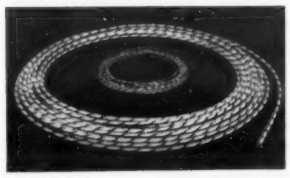
New Processes & Materials

LIGHTWALL ALUMINUM TUBING
bent and fabricated to specification

Lightwall aluminum tube is bent without wrinkling by this company which is currently in production on ¾ in. OD, 0.025 in. wall (shown) and 1 in. OD tubing. The fabricated tubular part is used for hose connections in automatic washing machines. Company will bend almost any size tube in copper, brass, aluminum, steel and stainless steel. Fabrication service offered by **Hi-Mill Mfg. Co.**, Dept. A, Milford, Mich.

For more details circle NED-888 B8 on enclosed inquiry slip

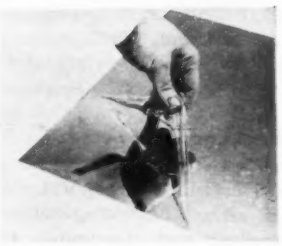
TEFLON TAPE
color-striped in ¼ to 1 in. widths



Principal use for color-striped unsintered Teflon tape is insulation of wire products and electronic parts which need to be color identified. The striped Bonnytape is available in ¼ to 1 in. widths and can be provided in any specified color. Tape is currently being used as wire insulation material which is applied to wire in one operation. Made by **Bonny Mfg. Corp.**, 339-1 Auburn St., Auburndale 66, Mass.

For more details circle NED-889 B8 on enclosed inquiry slip

METAL SURFACE PROTECTORS
adhesive paper or strippable film



Mar-Not is a protective coating that permits Nickeloid prefinished metal to withstand severe fabricating and handling operations without harm to the highly finished surface. Type M is a pressure-sensitive paper which adheres to the metal. Type C is a stripping type plastic film which stretches as the metal is formed. Both coatings can be peeled from surface when fabrication is complete. Type C can also be blown off with compressed air. Made by **American Nickeloid Co.**, Dept. E, Peru, Ill.

For more details circle NED-890 B8 on enclosed inquiry slip

PACKAGING FILM
is transparent, prevents corrosion

Protection of iron, steel and aluminum products is provided by MY-V-I transparent, VCI-treated, heat sealable film. In addition to inhibiting corrosion, it permits examination of the contents without removal of the product from the package. It heat seals at 200° F under a pressure of 5 psi in 1 second. It combines the high tensile strength of a polyester film with high heat seal strength. Peel strength is 2 lb per in. at a pull rate of 2 ipm. Film is currently available in 1.5 mil thickness, in rolls 12 in. wide by 100 yd long. Wider stock in various gages will be available soon. Made by **Daubert Chemical Co.**, Dept. NED, 333 N. Michigan Ave., Chicago 1, Ill.

For more details circle NED-891 B8 on enclosed inquiry slip

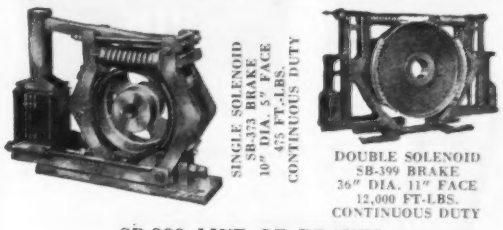
INDUSTRIAL PASTE WAX
for mold release, dry lubrication

Recommended uses of No. 6001 industrial paste wax include mold release for glass fiber reinforced plastics, concrete form release, dry lubricant for threaded fasteners, protective coating, and polish. It can be applied to large surfaces by wiping or brushing on; to small parts by tumbling in wood, leather, or composition chips impregnated with the wax. Wax dries in 4 to 8 minutes to a dull, amber color. Upon buffing, it becomes clear and hard. Wax can be removed in solvent baths, vapor degreasers, and alkaline washers. Formulated by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

For more details circle NED-892 B8 on enclosed inquiry slip

TROMBETTA SOLENOID CORP.

331 N. MILWAUKEE ST. • MILWAUKEE 2, WIS.



SB-300 LINE OF BRAKES

Sizes 2½" dia. x 1½" face to 72" dia. x 14" face
Continuous rating range from 3 ft.-lbs. to 24,000 ft.-lbs.

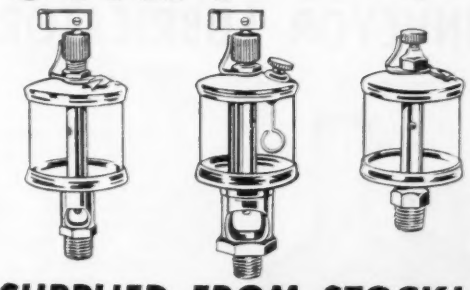
8 SPECIAL FEATURES

(1) Operated by long stroke, high power large capacity solenoids. (2) Only 50% of solenoid stroke is used to release the brake. The extra 50% is reserve to take care of lining wear. (3) They can be used for stopping as well as for holding loaded motors. (4) In double solenoid type, one solenoid operates the brake and the other is a spare assuring uninterrupted operation. (5) They are available for all voltages and frequencies alternating current. (6) Also for all voltages direct current series or shunt connections. (7) In shunt operation no series resistances, no discharging resistances are necessary. (8) They are available with oil immersed and explosion proof solenoids.

NINE LINES OF SOLENOIDS
RECIPROMOTORS AND SEMOTORS
Write for Bulletin EE-180. See Sweet's catalog file.

For more details circle NED-893 B8 on enclosed inquiry slip

SWIFT Glass Body Oil Cups



SUPPLIED FROM STOCK!

Let Swift supply you with Glass Body Oil Cups from its complete stocks. Oil Cups have polished brass finish, tough heat-and-stain resistant Pyrex glasses. Available in all standard sizes for immediate delivery.

Sight Feed & Plain Glass Oil Cups For gravity feed oiling of bearings and other points where no back pressure exists. Spring loaded slide opening on lid keeps dust and dirt from bowl.

Gas Engine Lubricators For gravity feed of oil against pressure on gas engines, blowers, vacuum pumps, low pressure air pumps.

SWIFT Glass Division

SWIFT LUBRICATOR COMPANY, INC.

5 Glass St., Elmira, N.Y.

For more details circle NED-894 B8 on enclosed inquiry slip

Angles, radii, holes, surfaces . . .

inspect them *all* with one instrument

Optical gaging with a Kodak Contour Projector lets you inspect critical dimensions on a wide variety of components to close tolerances quickly and economically.

Quickly because you can inspect *at a glance*. It's simply a matter of comparing the magnified projected image of the component with a chart gage on the projector screen.

Economically because you eliminate the need for buying a multitude of gages. With a Kodak Contour Projector, you see at a glance what it takes many gages and gaging operations to tell you.

A Kodak Contour Projector can solve your inspection problems in toolroom . . . receiving . . . production . . . final inspection. To find out more about optical gaging, send for the booklet "Kodak Contour Projectors." Write to:

Apparatus and Optical Division
EASTMAN KODAK COMPANY, Rochester 4, N. Y.

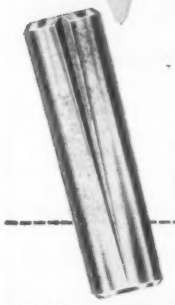
the KODAK CONTOUR PROJECTOR

Kodak

For more details circle NED-895 B8 on enclosed inquiry slip

have you checked

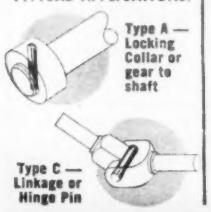
DRIV-LOK PIN *advantages?*

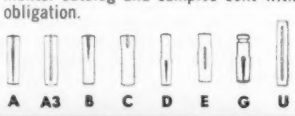


1. Positive anchoring . . . once in they *stay in* . . . yet they're reusable
2. Stronger, safer, solid body
3. Quick installation . . . Lower Costs

DRIV-LOK Pins are effecting great economies and product improvement in applications of every type. Easy to install — just drill the hole and press or drive them in. The job is done — no reaming, no expensive hole preparation. Available in carbon steel in 8 standard types; also a wide variety of special materials. Write us, describing your fastening requirements. Catalog and samples sent without obligation.

TYPICAL APPLICATIONS:

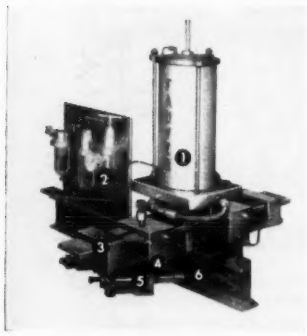




DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

For more details circle NED-896 B8 on enclosed inquiry slip

Automatic
CONVEYOR LUBRICATORS



700 series
1. Lubricant Reservoir.
2. Air Control Panel — can be remotely located — includes filter — regulator —lubricator unit.
3. Frame: Supports lubricating mechanisms — simple adjustments for quick and correct location of pumping units.
4. Cam: Locates nozzle in correct pick-up position, provides means for locking in non-operating position.
5. Booster Air Cylinder operates high pressure lubricant piston.
6. Nozzle — Pick-up Assembly

model 112X
1. Two gallon reservoir.
2. Crown Regulator & Lubricator.
3. Tripping Arm — triggered by trolley wheel, oil is fed into air stream, drop-by-drop to form a fog (no dripping).
4. Steel Manifold.
5. Spray Nozzles lubricate wheel bearings.

model 114X
Automatically lubricates, single or double chains of slat-type conveyors. Air enters reservoir through a regulator — valve opens by cam action — the tripping mechanism is actuated by wheels or link pins passing the lubricator.

ADVANTAGES
Reduces power consumption.
Saves Lubricant.
Reduces conveyor repairs.
Saves down-time & labor.

model 115X
A continuous spray lubricator for chains only — air passes through a solenoid valve into the lubricator chamber, valve is wired on the inlet to the starting switch — therefore continuously lubricates as long as chain is in motion.

Send for eight-page catalog No. CL956 which describes and includes engineering data on six different models.

J. N. FAUVER CO., INC.
47 W. HANCOCK DETROIT 1, MICH.

For more details circle NED-897 B8 on enclosed inquiry slip

New Literature & Catalogs

Wire Rope & Its Uses

Macwhyte Co.—Illustrated bulletin "Rope-ology" is issued periodically and contains descriptions of new or unusual applications of wire rope, wire rope assemblies, and fittings. Uses cover many fields, including industrial, mining, and marine. Interested readers will be placed on the mailing list to receive this bulletin.

For more details circle NED-898 B8 on enclosed inquiry slip

Hole Punching & Notching Equipment

Punch Products Corp.—"Basic Facts on Unitized Tooling" is title of 20-page illustrated brochure that describes Unipunch tools, how they work, and the tooling and production costs that can be saved. Punching and notching assemblies are detailed, and range of round and shaped holes that can be punched is shown.

For more details circle NED-899 B8 on enclosed inquiry slip

Expanding Mandrels

Western Tool & Mfg. Co.—20-page illustrated, loose-leaf Bulletin 100 presents specifications on Champion Standard, Precision 600, Lok-Tite 700, and Drawbar 800 series of expanding mandrels, as well as Brown & Sharpe and Morse taper shank arbors and special mandrels. Research, development, and finished plastics products for special applications are also described and illustrated.

For more details circle NED-900 B8 on enclosed inquiry slip

Solenoids

Detroit Coil Co.—Dimensional drawings, photos, and force characteristics of every industrial solenoid model in the Decco line are found in condensed 6-page Catalog 572. Included are alternating and direct current, shock-mounted, and oil-immersed models for a wide variety of uses.

For more details circle NED-901 B8 on enclosed inquiry slip

Packaged Drives

Clark Controller Co.—Packaged speed control drives which incorporate in one package the elements of adjustable-voltage direct current drives are described and illustrated in 8-page Bulletin 20,000. Basic circuit, and the many modifications available are detailed, as are specifications and typical applications.

For more details circle NED-902 B8 on enclosed inquiry slip

Weatherproof Meter Houses

Moran Furnace & Sheet Metal Co.—Specifications and construction features of line of weatherproof meter houses are given in 12-page illustrated Catalog 10. Included are standard, multidoor, horizontal, portable walk-in, utility, indicating, and recording types. Custom-built units are also covered.

For more details circle NED-903 B8 on enclosed inquiry slip

Jig & Fixture Components

Northwestern Tool & Engineering Co.—Over 400 components for jigs, fixtures, and special machinery, and over 200 clamping items are detailed in 16-page illustrated Catalog 28. Scale size tracing templates of the jig and fixture components are included, as is a selection chart for choosing parts for most machine tools.

For more details circle NED-904 B8 on enclosed inquiry slip

Industrial Gloves

Pioneer Rubber Co.—Illustrated data sheets in this industrial glove catalog give specifications and factual information on the entire line of liquidproof industrial gloves. A performance data sheet guides the user in selecting the best glove for use with over 100 oils, acids, caustics, and solvents.

For more details circle NED-905 B8 on enclosed inquiry slip

Honing Equipment

Micromatic Hone Corp.—Brief explanation of the Microhoning process, plus capacities and specifications of equipment, is content of illustrated 32-page service and equipment Catalog AR-136. Covered are honing machines, tools, fixtures, abrasives, and coolants for cylindrical, spherical, and flat applications.

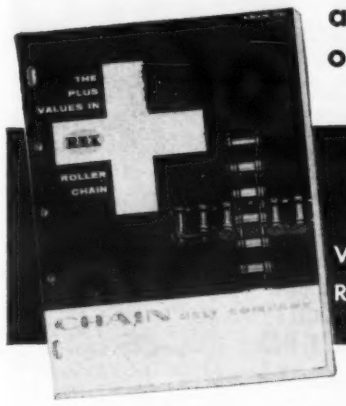
For more details circle NED-906 B8 on enclosed inquiry slip

Free-Machining Steel

LaSalle Steel Co.—24-page engineering booklet "A New Material" cites properties of Fatigue Proof steel bars. This free-machining high strength steel requires no heat treating to achieve strength levels in excess of 140,000 psi.

For more details circle NED-907 B8 on enclosed inquiry slip

GET BULLETIN 5725



and find out about...

THE PLUS VALUES IN REX ROLLER CHAIN

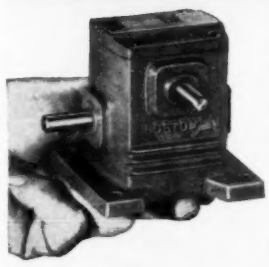
Yes, find out about the special design and manufacturing techniques that make an important difference...*put a plus value* in Rex Roller Chain. Learn about the rigid quality control that gives you a better chain...consistently.

Bulletin 5725 explains why Rex Roller Chains last longer ... why Rex Roller Chains have greater resistance to fatigue and failure. Write today for your copy of Bulletin 5725, "The Plus Values in Rex Roller Chain." CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT

For more details circle NED-908 B8 on enclosed inquiry slip

NEW SMALL SIZES IN BOSTON GEAR SPEED REDUCERS

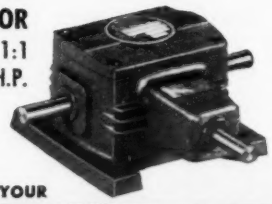


FROM STOCK!

Worm Gear REDUCTORS
Ratios 5:1 to 30:1
.03 to .08 H.P.

For light-duty applications requiring maximum efficiency and lasting economy.

Miter Gear REDUCTOR
Ratio 1:1
.03 to .333 H.P.



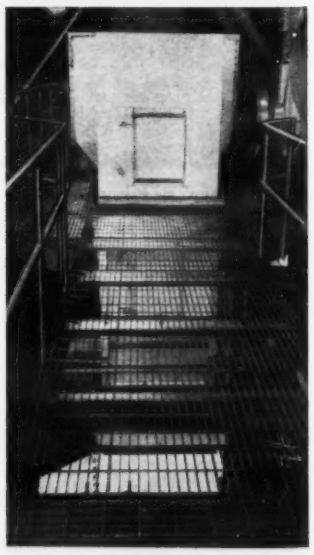
FOR DETAILS CALL YOUR

BOSTON *Gear* DISTRIBUTOR

For more details circle NED-909 B8 on enclosed inquiry slip

Gary **WELDED GRATING**

TAILOR MADE INSTALLATIONS
- Cost Less
- Look Better
- Give Better Service...



Eliminate expensive field alterations, piecing together and wasted material and labor by specifying Gary Welded Grating. Designed for specific loads and deflections, Gary grating is as easy to specify as it is to install. Gives maximum ventilation and illumination and long-maintenance-free service. Write for full information . . . ask for Bulletin N-28.

ROCKWELL SPRING & AXLE CO.
Gary Grating Division
4045 EAST SEVENTH AVE., GARY, INDIANA

For more details circle NED-910 B8 on enclosed inquiry slip

AGASTAT

Compact . . . Dust-Proof

TIME DELAY RELAYS

solenoid actuated—pneumatically timed

Introduces time delays into a-c or d-c circuits. Easily adjusted to provide delays ranging from 0.1 second to five or more minutes.

The AGASTAT is small, light, and operates in any position. Dust-proof timing chamber assures long operating life with a minimum of maintenance.

AGA DIVISION

Address Dept. A15-25
Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth, New Jersey

For more details circle NED-911 B8 on enclosed inquiry slip

R-W "Zig-Zag"

CONTINUOUS POWER

CONVEYORS

. . . for efficient, economical overhead materials handling!

Pictured above is an R-W "Zig-Zag" installation in the meter shop of the Northern Illinois Gas Company . . . a plant described as being "as modern as tomorrow". R-W "Zig-Zag" Conveyors efficiently utilize valuable overhead space to provide a continuous flow of materials for maximum production. Extremely flexible . . . easily moves up, down, in, out and around . . . will carry unit loads up to 125 lbs. at speeds from 1 inch to 100 feet per minute . . . may be quickly and easily altered, expanded or relocated. Write today for complete information...request Cat. No. A-93R.

RICHARDS-WILCOX MFG. CO.

435 W. THIRD STREET • AURORA, ILLINOIS • Branches in Principal Cities

For more details circle NED-912 B8 on enclosed inquiry slip

AIR COMPRESSORS

15% Less Fuel—15% More Power

FOR PLANT MAINTENANCE

Chop maintenance costs with the Schramm 75 or 125 cfm PNEUMAPOWER and 125 cfm PNEUMADIESEL piston-type Air Compressors. Most compact, most economical gasoline and diesel engine driven compressors in their ratings. Operate paving breakers, sump pumps, all maintenance air tools. Watercooling permits operation at higher temperatures than air-cooled or oil-cooled compressors. Cost less to buy and operate. See local dealer or write for free catalog.

Schramm, Inc.

MANUFACTURERS OF AIR COMPRESSORS

700 North Garfield Avenue • West Chester, Penna.

For more details circle NED-913 B8 on enclosed inquiry slip

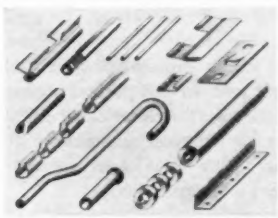
New Processes & Materials

COPPER PLATING AGENT
permits thick, smooth deposits

Roughness, treeing, and nodular build-up are eliminated in copper plating with use of CuSol addition agent which makes possible smooth surface copper plating to any practical thickness. Its acid base does not affect laminate boards used in printed circuits. Suited for electroformed molding operations, the agent is usable up to 15 days without replenishment in any normal cold or warm acid copper bath. The fine grain copper deposit eliminates flaking and cracking. Current density range is from 5 to 280 amp per square foot. Photo shows smooth 0.030 in. thick sample at left, plated by CuSol process, and 0.016 in. sample at right, plated in an ordinary acid copper bath. Made by **Seymour Mfg. Co.**, Franklin St., Seymour, Conn.

For more details circle NED-914 B8 on enclosed inquiry slip

PLASTIC EXTRUSIONS
fabricated to specifications



Finished or semifinished parts can now be made to specifications from plastic extruded rods, tubes or molding. Techniques allow precision cutting of small diameter tubes to length tolerances within ±0.010 in. Drilling, stamping, bending, and swaging are other fabrication methods which can be employed. Tooling charges for fabricated plastic extrusions usually range from $15.00 to $250.00. Made by **Anchor Plastics Co.**, 3636 36th St., Long Island City 6, N. Y.

For more details circle NED-915 B8 on enclosed inquiry slip

CUTTING FLUID
for various machining operations

Speeding metal removal in production tapping, planing, shaping, and milling operations as well as retarding tool wear are dual roles performed by Tap-Cut 25. This chemically active, organic compound is a solubilized condensate of sulphur, chlorine, sperm oil, and paraffin oil. Fluid is applied by brushing it on surfaces being machined. It clings to the tool. Flash point is over 400° F. It is removable with alkali or emulsion type cleaners or by vapor degreasing. Made by **United Laboratories, Inc.**, Dept. N-25, Box 918, Huntington, Ind.

For more details circle NED-916 B8 on enclosed inquiry slip

POWDER METAL PROCESS
uses variety of iron alloy powders in producing high ductility parts

Iron alloy powders of closely controlled particle size and distribution are used in the Steelmet process for producing intricate parts with properties said to be comparable to machine-wrought parts. Single pressing and sintering operation converts raw materials to many iron alloy compositions which are at least 95 per cent dense. Ferrous compositions range in strength from 42,000 to over 200,000 psi and in elongation from 36 to 1 per cent.

Wide variety of alloy compositions can be produced, all with good green strength which permits compacting at high production rates in automatic presses. All can be subjected to and are improved by heat treating. Small gear shown is made from the same composition as the bar which is shown twisted 720 degrees, or two full turns. Made by **P. R. Mallory & Co.**, 3027 E. Washington St., Indianapolis 6, Ind.

For more details circle NED-917 B8 on enclosed inquiry slip

EVERY ENGINEER will want a copy of this BULLETIN

WRITE FOR BULLETIN 213. Complete details and mounting dimensions on Hannifin Series "A" Square Type Fluid Power Cylinders, usable up to 200 psi, air or oil. This is the cylinder with the new, externally removable cartridge gland...the biggest improvement in cylinder design in the last 50 years. The "A" line is complete! 11 bore sizes from 1½" to 14"—13 standard mountings, many combinations. Steel heads. Brass bodies. Piston rods ground, polished and hard chrome plated. Send for Bulletin 213. It's the easiest catalog to use in the cylinder business.

HANNIFIN

Hannifin Company, 527 S. Wolf Road, Des Plaines, Illinois

Air and Hydraulic Cylinders • Presses • Air Control Valves

For more details circle NED-918 B8 on enclosed inquiry slip

NEW Rockwood "316" Stainless Steel Ball Valve

• Resists Wear Longer . . . Stays Leakproof

PLUS The Outstanding Features of Other Rockwood Ball Valves — easy operation, low pressure sealing, stem repacking without removal from the line. Full, round flow every time.

PLUS Variations — many different seat types. Available with remote air-operation in wanted sizes ⅜" to 2". Write for complete specifications in the folder NEW ROCKWOOD "316" STAINLESS STEEL BALL VALVE.

ROCKWOOD SPRINKLER COMPANY

2289 Harlow Street, Worcester 5, Mass.

For more details circle NED-919 B8 on enclosed inquiry slip

Cut Maintenance $600 yearly per unit with WORLD Hand Dryers

Best By Test! Factory Guaranteed!

THOUGHTFUL BUYERS USE WORLD!
Marshall Field & Co.
Northwestern University
Chrysler Corp.
Union Pacific Railroad
Libby-Owens-Ford
Frick Building
U. S. Army
U. S. Navy
Gimbel Brothers
Howard Johnson's
Alton, Ill. Schools
Pick Hotels
Gulf Oil

Each high speed WORLD Hand Dryer can save up to $600 per year on paper and maintenance . . . dry hands fast as towels . . . keep washroom clean and sanitary.

Prove it to yourself under our FREE trial offer! Full details on request.

WORLD

MAIL THIS COUPON NOW!

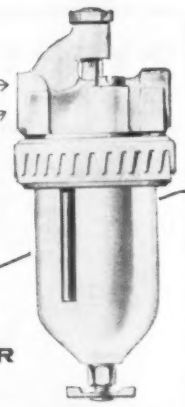
WORLD DRYER CORPORATION
616-22 W. Adams St., Chicago 6, Ill.

Gentlemen: Without obligation send me copies of letters from users, also folder of facts including cost-saving figures and full details on your FREE-TRIAL offer.

My name_____
Firm name_____
Street_____
City_____ State_____

For more details circle NED-920 B8 on enclosed inquiry slip

HIGH EFFICIENCY LUBRICATION even at LOW FLOW RATES! with WATTS new



AIR LINE LUBRICATOR

Efficient because:

1. **Sub-miniature, high velocity venturi section** positively creates sufficient pressure — even at flow rates as low at one cubic foot per minute — to vaporize oil into a fine mist for uniform, economical lubrication.
2. **Exclusive by-pass pick-up** delivers remainder of air to venturi outlet, thus eliminating the excessive pressure drop associated with other high velocity venturi sections.

Write for complete information on the WATTS LINE of filters, regulators and lubricators with exclusive features for more efficient air supply to pneumatic equipment.

WATTS REGULATOR COMPANY SINCE 1875

20 EMBANKMENT ROAD • LAWRENCE, MASSACHUSETTS

For more details circle NED-922 B8 on enclosed inquiry slip

NEW FASTENER CATALOG

This is really an up-to-date handbook covering the Design and Purchasing of cold headed fasteners and small parts. Loaded with money saving 'Know-How'! Send for your copy of Catalog No. 106.

Hassall MANUFACTURERS SINCE 1850

JOHN HASSALL, INC.

2178 WESTBURY, LONG ISLAND, N. Y.

For more details circle NED-923 B8 on enclosed inquiry slip

It's OK Boys

I use the Modern Safety Drill Table for all sorts of jobs. No more bother with clamps, V-blocks, parallels. Instead of spending 20 minutes to make a tough set-up, I just drop in the work and am ready to drill in a couple minutes. I save a lot of time. In fact, the company guarantees that this combination drill table and vise will save its cost on labor alone in six months in your shop.

FREE TRIAL OFFER

Try it for 30 days at our expense. Write for illustrated literature and full details.

MODERN MACHINE TOOL CO.
2005 LOSEY AVENUE
Jackson, Michigan

For more details circle NED-924 B8 on enclosed inquiry slip

New Literature & Catalogs

Dry-Type Distribution Transformers

R. E. Uptegraff Mfg. Co.—12-page engineering Manual 137 on dry-type distribution transformers provides data on 3 to 10 kva, 15 to 112½ kva, 3 to 112½ kva, and 150 to 500 kva series. First two have Class H insulation, whereas latter two feature Class B insulation—all silicone impregnated for moisture resistance and high temperature characteristics.

For more details circle NED-925 B8 on enclosed inquiry slip

Rotary Dumper

Heyl & Patterson, Inc.—The rotary car dumper described in 16-page Brochure 957 is so well balanced that it can dump and return a spotted car in one minute with only 30 hp drive. Dumper handles hopper and gondola cars and is equipped with two clamps which hold the car secure without use of counterweights.

For more details circle NED-926 B8 on enclosed inquiry slip

Square Head Hydraulic Cylinders

Wellman Engineering Co., Anker-Holth Div.—Data sheets on over 25 square head hydraulic cylinders are provided in 30-page Catalog 157-S. Of tie-rod construction, cylinders are rated 2000 psi working pressure and up to 3000 psi in nonshock service. Standard bores range from 1½ through 12 in. Line is available for water or special fluids.

For more details circle NED-927 B8 on enclosed inquiry slip

Flush Pin Depth Gages

Rite-O-Tool & Gage Co.—Flush pin gages and dial indicator gage units are subject of 16-page catalog and price list. Chart tabulations allow choice of 650,000 standard bar and barrel-type gage variations to be ordered by number alone. The new ¾-in. adjustment range dial indicator gage is described.

For more details circle NED-928 B8 on enclosed inquiry slip

Worm Gear Technical Data

Michigan Tool Co., Cone-Drive Gears Div.—Extensive technical information on design and application of double-enveloping worm gearing is presented in 24-page Bulletin CD-200. Engineering formulas and step-by-step instructions for using them in applying Cone-Drive gearing to drives of all types are given.

For more details circle NED-929 B8 on enclosed inquiry slip

Gear Production Equipment

National Broach & Machine Co.—Complete line of Red Ring gear production equipment and broaching tools is described in well-illustrated 24-page Catalog AP57-11. General capacity table and descriptions of rotary shaving machines for internal and external spur and helical gears up to 200 in. capacity are included. Also covered are gear tooth hones, sound testing and checking machines, gear and spline grinders, and shaving cutters.

For more details circle NED-930 B8 on enclosed inquiry slip

Bringing Materials Up to Date

Carborundum Co.—"Advanced Materials Technology" is title of new quarterly publication featuring technical information on materials to meet severe or unusual conditions in processing or operation, such as extreme heat, abrasive action, or corrosion. First issue gives data on shelf-bonded KT silicon carbide which has outstanding properties up to 4000° F. Those interested will be placed on mailing list to receive this publication regularly.

For more details circle NED-931 B8 on enclosed inquiry slip

Industrial Heaters

American Air Filter Co.—Construction, application, and performance features of Herman Nelson industrial heaters are covered in 26-page Bulletin 750A. Horizontal, vertical, upright, vertical inverted, and L-shaped units are specified; and fan, coil, filter, and damper sections are described, as are bases, wall intakes, and humidifiers. Capacities range from 100,000 to over 1 million Btu per hour.

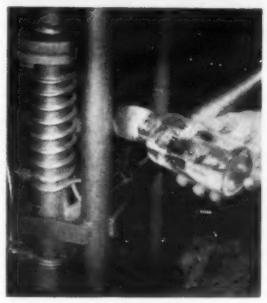
For more details circle NED-932 B8 on enclosed inquiry slip

Deburring & Cleaning Brushes

Osborn Mfg. Co.—Specifications and respective uses of Situft and Helituf deburring and cleaning brushes are given in 8-page folder. Situft straight line brushes in ¼ to 1¼-in. diameters are designed to operate in holes and cavities. Helical face Helituf brushes in ⅜ to 1⅛-in. diameters are mounted on drill presses, lathes, grinders, or other tools for cleaning irregular surfaces and hole diameters.

For more details circle NED-933 B8 on enclosed inquiry slip

DIFFUSION PUMP OIL COSTS CUT IN HALF

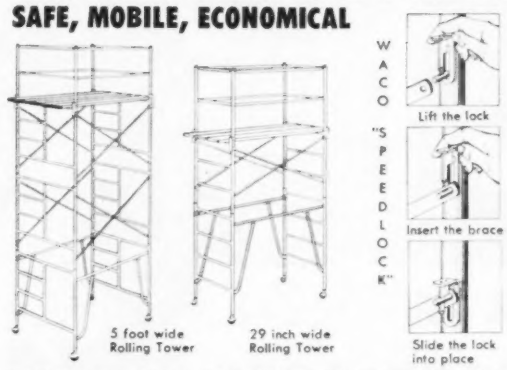


If you operate a vacuum system at pressures below a micron, chances are that Narcoil-40® can halve your diffusion pump oil costs and give better performance, too! That's because multipurpose Narcoil-40 combines the best features of special purpose diffusion pump oils costing several times as much. It gives you high forepressure tolerance, untrapped blank-offs to 2 x 10^{-7} mm Hg., plus high oxidation resistance and chemical stability. Jets stay clean for months. Pints $7.75; Quarts $14.50; Gallons $38.50; 55 gallon drums $24.50 per gallon.

Sound too good to be true? Order some today, and if you're not completely satisfied, we'll refund your money PLUS $5.00 for your trouble. For more information on Narcoil-40 or Narcoil-10, its companion oil for booster diffusion pumps, write today. **NRC EQUIPMENT CORP.**, Dept. 29-P, 160 Charlemont Street, Newton 61, Mass. Advt.

For more details circle NED-934 B8 on enclosed inquiry slip

WACO ROLLING MAINTENANCE TOWERS SAFE, MOBILE, ECONOMICAL



WACO ROLLING TOWERS, with either a 29 inch or the 5 foot wide base, easily handle those "off the floor" jobs of maintenance, painting, cleaning or new installation. Waco's exclusive "Speedlock" saves you money too, by cutting the time involved in erecting and dismantling these units.

WACO ROLLING TOWERS are available in multiples of five foot heights with built-in ladders. Waco rolling towers move on heavy duty free wheeling casters with an easy locking brake.

WACO ROLLING TOWERS can also be fitted with straddle braces in place of cross braces, allowing fixed objects to be straddled or providing free passageway for traffic.

For more information on Waco Rolling Towers send for Waco's FREE Scaffolding Catalogue, or check yellow pages of your phone directory for your nearest Waco distributor.

WACO MANUFACTURING CO.
3555 Wooddale Avenue
Minneapolis 16, Minnesota

For more details circle NED-935 B8 on enclosed inquiry slip

Clean DRAINS Faster! Easier!

Weighs just 8½ lbs. less snake

NEW

Use ¼" or 5/16" snake. Holds 35 ft. of 5/16" snake.

Flexi-Handi-Roder

The last word in a compact, lightweight quality-engineered drain roder.

★ Reverses Right or Left — by flip of switch.
★ All Steel Construction — bearings throughout.
★ Precision Built Motor — AC/DC DRILL type.
★ Jacobs Hand-Tite Chuck — 2-tone finish.

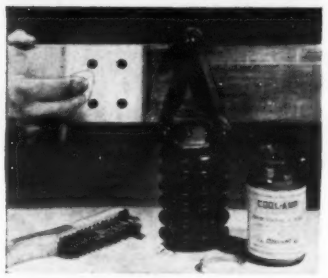
See your Wholesaler or Write —

FLEXIBLE PLUMBERTOOLS, INC.
3782 Durango Avenue, Los Angeles 34, California
Frank Donovan Company, 9 S. Clinton St., Chicago 6, Illinois

For more details circle NED-936 B8 on enclosed inquiry slip

SILVER PLATING

"ON THE JOB" WITH POWDER



Cool-Amp Silver Plating Powder deposits a genuine coat of silver that will not peel off, and will provide lasting protection against oxidation. It has been used extensively and is accepted as equal to electroplating for bolted and stationary contacts.

Reduces Maintenance
Saves Electricity

Cool-Amp minimizes overheating and provides cool maximum conductivity for your copper, brass or bronze contacts. Used on all current carrying connections, Cool-Amp silver plating assures long life and low maintenance and will prevent series of losses from oxidation that are too small to create noticeable heat but still accumulate into major power loss. Apply to fuse clips and blades to reduce overheating.

Cool-Amp contains no cyanide and is simple to apply. It can be used by any number of people at the same time ON THE JOB in underground vaults, sub-stations and hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND **SHIPPED PREPAID**

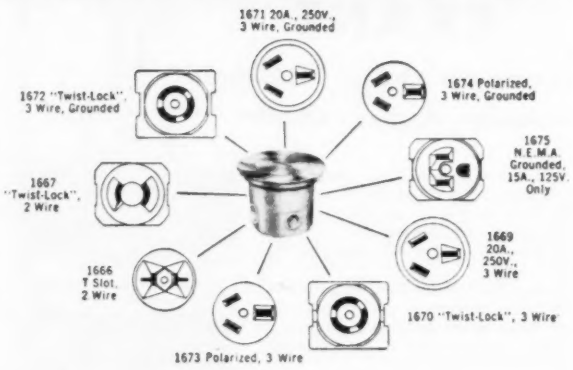
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

The COOL-AMP Co.

Dept. ED. 8603 S.W. 17th Avenue, Portland 19, Oregon

▲ For more details circle NED-937 B8 on enclosed inquiry slip ▲

NEW! T&B floor box receptacle combination to fit all plugs and match all circuit wiring



Now you can save time, save installation money and increase safety — all these T&B receptacles fit all T&B floor boxes eliminating special boxes, special adapters and make-shift arrangements.

See your local T&B distributor for full information, or write:

THE THOMAS & BETTS CO.
Incorporated
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

▲ For more details circle NED-938 B8 on enclosed inquiry slip ▲

New Processes & Materials

ACOUSTICAL CEILING BOARD
glass fiber type can be bent

Resilient toughness of G-B Ultracoustic glass fiber ceiling board allows it to be bent without breaking. Used in grid-type suspended ceiling systems, board has random-fissured surface texture that resembles Travertine marble. Features include NRC rating of .85, fire hazard classification of 15 and under, and average light reflection of 85 per cent. A K-factor of 0.23 at 75° F mean gives board outstanding thermal efficiency. Product is offered in 24 x 48 x ¾-in. and 24 x 24 x ¾-in. panels that weigh only 3 oz per sq ft. It can be cut with a sharp knife to fit around obstructions. Made by **Gustin-Bacon Mfg. Co.**, Dept. H, 210 W. Tenth St., Kansas City 6, Mo.

▲ For more details circle NED-940 B8 on enclosed inquiry slip ▲

EVAPORATION BARRIER
prevents escape of vapor, fumes

Developed for use on hot phosphate coating baths, Serseal chemical blanket acts as a barrier to prevent the escape of steam and fumes. Heat savings of up to 70 per cent have been reported. In some cases, need for ventilating systems is eliminated. Made by **American Chemical Paint Co.**, Ambler 50, Pa.

▲ For more details circle NED-941 B8 on enclosed inquiry slip ▲

WAX EMULSIONS
developed for industrial uses

Four blends of clear wax emulsions and three grades of black wax emulsions have been formulated specifically for industrial applications. Clear emulsion type protective coating waxes are usable as mold releases; lubricants for steel strapping; protective coatings on copper, brass, and aluminum; and shell lubricants. They are also suited as dressings on rubber, plastics, and leather. Waxes adhere to clean surfaces, dry to medium gloss, can be buffed to high gloss, and form a thin protective film. They can be applied by dip, flow coat, wipe, or spray. The black waxes differ only in that they consist of black wax and inhibitor emulsion in water. Made by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

▲ For more details circle NED-942 B8 on enclosed inquiry slip ▲

Available in knit wrist, safety cuff or gauntlet style and in full or palm coated types, Surety offers you the answer to safety, service and hand comfort with these coated fabric gloves. A vinyl base combined with a Sureseal (Hycar) rough finish Surety Griptites achieve the long life and claw-grip qualities particularly needed when working in oils, greases and slippery solvents. Write for bulletin today. Dept. N

THE SURETY RUBBER CO. CARROLLTON, OHIO

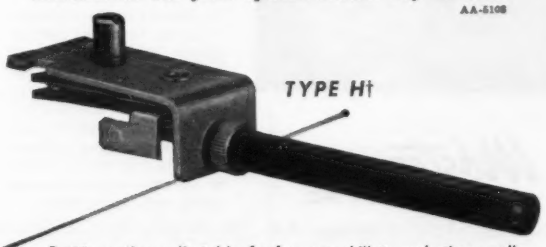
In Canada: Safety Supply Co., Toronto

▲ For more details circle NED-943 B8 on enclosed inquiry slip ▲

When you plan your product look to **STEMCO THERMOSTATS** *first*

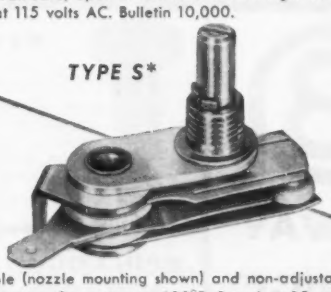
With competitive conditions ahead, you're probably reappraising your product line. Or completely redesigning. Either way, that's the time to look into the Stemco thermostat line. Strip or disc types . . . positive or snap acting . . . adjustable or non-adjustable . . . virtually any type of terminal arrangement or mounting provision. No other line of bimetal thermostats has as many styles in production. This, combined with Stevens application engineering service, means you profit from important savings in being able to use production line Stemco thermostats for your special needs. Try us *now*.

AA-5108



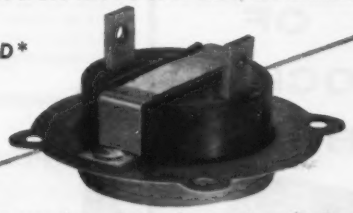
TYPE H†

Positive acting, adjustable, for fry pans, skillets, and other appliances. Fail-safe, open in low to 500°F in high. Rated at 1650 watts at 115 volts AC. Bulletin 10,000.



TYPE S*

Adjustable (nozzle mounting shown) and non-adjustable styles. Positive-acting. Operation to 600°F. Rated at 15 amps at 115 volts AC; 7 amps at 230 volts AC. Screw and spade terminals. Bulletin 1000.



TYPE D*

For laundry dryers or other surface and warm air applications. Snap-acting disc type UL approved for operation to 300°F. Rated at 25 amps at 120-240 volts AC. Open or enclosed styles. Bulletin 8000.

*Refer to Guide 400 EO for UL and CSA approved ratings.
†Patent Applied For

STEMCO® THERMOSTATS

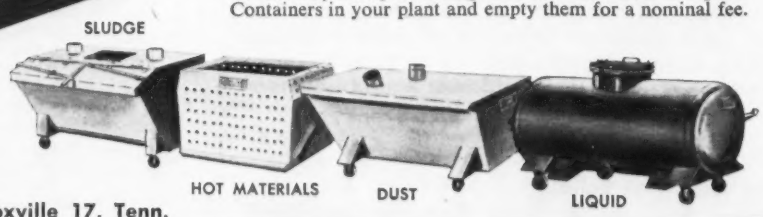
STEVENS manufacturing company, inc.
Lexington and Mansfield, Ohio

▲ For more details circle NED-944 B8 on enclosed inquiry slip ▲

"CONTAINERIZE" waste & rubbish as it accumulates

RUBBISH

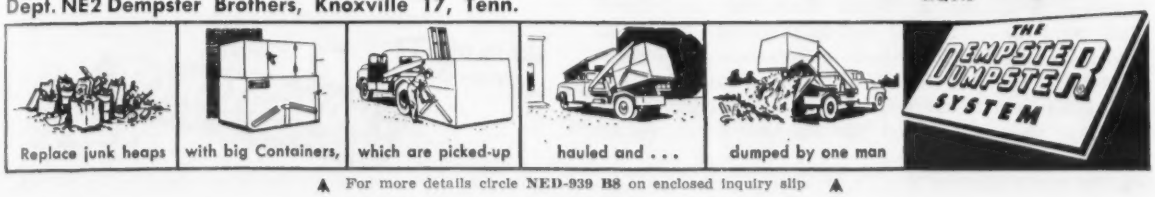
Eliminate unsightly junk heaps, battered cans or open bins which let trash blow and scatter. Place big, clean Dempster-Dumpster Containers at points of waste accumulation inside and outside your plant. When full, they are picked-up, hauled and dumped by one man and one truck-mounted Dempster-Dumpster. Regardless of the type of waste you generate, there is a container built to provide enclosed, big-volume storage for it. You can own this low-investment System, or a nearby Dempster-Dumpster Contract Hauler will place Containers in your plant and empty them for a nominal fee.



WRITE TODAY

For your free copy of the new manual, "How to Cut Industrial Waste Disposal Costs," or the name of the Dempster-Dumpster Contract Hauler in your area.

Dept. NE2 Dempster Brothers, Knoxville 17, Tenn.

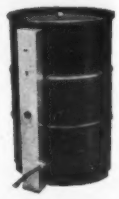


▲ For more details circle NED-939 B8 on enclosed inquiry slip ▲

Aircon VAPOR DEGREASERS

ANY SIZE . . .
Standard or Custom

Aircon Vapor Degreasing Systems are available in a complete line, ranging in size, from the smaller bench and barrel-type units to the larger, permanent, high capacity degreasers.



Aircon Degreasers are:
- GAS, ELECTRIC OR STEAM HEATED
- COMPLETE UNITS WITH ALL SAFETY EQUIPMENT

NO EXTRAS TO BUY!
Low level thermostat and water flow interlock are included at no extra cost.

Write today for full information

WE ARE DESIGNERS AND ENGINEERS OF SPECIAL DEGREASING EQUIPMENT. CONSULT US ON YOUR DEGREASING PROBLEMS.

Armstrong & White
CHESWICK, PENNSYLVANIA

For more details circle NED-945 B8 on enclosed inquiry slip

Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES

Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

For more details circle NED-946 B8 on enclosed inquiry slip

3-WAY CHOICE OF LOCKING BOLTS

Write for free brochure of Special Fasteners and their uses.

NYLOK®
. . . self-locking fasteners prevent air and fluid leaks. Stay locked in ANY position . . . won't vibrate loose. Permanent nylon insert won't shrink, dry, age, or turn brittle.

SPIN LOCK
. . . washer-head teeth prevent loosening . . grip tighter under extreme vibration. For oil and water-tight connections.

PLACE LOCK
. . . vibration-proof . . . needs no lock washer. Stays wrench tight under shock, impact, rotation, and vibration.

®"The Nylok Corporation"

BUFFALO BOLT COMPANY
Division of Buffalo-Eclipse Corporation
NORTH TONAWANDA, N. Y.

For more details circle NED-947 B8 on enclosed inquiry slip

New Literature & Catalogs

Do-It-Yourself Conveyorizing

Oliver Corp., A. B. Farquhar Div.—Practical, do-it-yourself workbook entitled "How To Plan and Install Your Own Conveying System" is a step-by-step guide for the selection, installation, and operation of power belt and gravity conveyors. Its 20 pages deal with many types of conveyors that are easily installed. Typical units are described and illustrated. Also included are condensed specifications, a detailed check list, and graph paper for plotting.

For more details circle NED-948 B8 on enclosed inquiry slip

Transistorized Equipment

Electronic Research Associates, Inc.—Nine single and multipage Catalogs 101-109 cover an extensive line of transistorized equipment. Included are inverters and converters, high current power supplies, test equipment, miniaturized power packs, regulated dc power supplies, Transamp package circuits, application power supplies, and a price sheet. Specifications are given.

For more details circle NED-949 B8 on enclosed inquiry slip

Toolholders & Inserts

Selection of Vascoloy-Ramet toolholders and inserts to fit specific metal-cutting jobs for maximum machining benefits is detailed in indexed 56-page illustrated "Toolholder Manual." Eight basic factors bearing on the choice of toolholders are related. Information on different types of turning and how to use all of the equipment covered is included. A trouble-shooting chart and technical data are also included. Request on company letterhead from Vascoloy-Ramet Corp., Waukegan, Ill.

For more details circle NED-950 B8 on enclosed inquiry slip

Gas Welding & Cutting Equipment

Modern Engineering Co.—Recommended applications of Meco line of oxyacetylene welding and cutting torches, air-acetylene torches, machine cutting torches, welding regulators, industrial regulators, pressure gages, tank couplings, adaptors, hose connections, and safety instruction manual are found in revised, 36-page 1958 welding equipment Catalog 160.

For more details circle NED-951 B8 on enclosed inquiry slip

High Temperature Springs

Associated Spring Corp.—How to design and select materials for springs that must operate at high temperatures is subject of 8-page illustrated bulletin. Mechanical and metallurgical changes that take place in metals at high temperatures are explained. Solutions to this problem, choice of design stresses, and use of certain manufacturing processes are covered.

For more details circle NED-952 B8 on enclosed inquiry slip

Protective Gloves & Finger Cots

Mine Safety Appliances Co.—Gloves made of five types of molded rubber and synthetic materials are subject of 8-page illustrated Bulletin 1310-2. They are offered in various weights, sizes, and types. Selection guide shows relative resistance of the materials to almost 200 common chemicals. Line of finger cots is also described.

For more details circle NED-953 B8 on enclosed inquiry slip

Pictures for Business & Industry

Multiprint Co.—"58 Tested Ways It Pays to Use Pictures in Your Business" is title of comprehensive guide to the use of low-cost picture reprints for sales building. Described are Multiprints. These tough, durable, easily-mailed reprints cost from 1 to 2 cents each, depending upon quantity.

For more details circle NED-954 B8 on enclosed inquiry slip

Positioning Gearmotors

Jordan Co.—Shaftrol and Valvetrol shaft-mounted, positioning gearmotors for valves, drives, pumps, and other applications are described in detail in 8-page Bulletin J-101. Specifications on a digital control system for machine tool positioning and process control are introduced.

For more details circle NED-955 B8 on enclosed inquiry slip

Steel Industrial Buildings

Armco Drainage & Metal Products, Inc.—More than 5000 sizes of steel buildings which are available featuring Steelox panel construction are offered in 8-page Bulletin SX-13757. Types include shed roof, gable roof frameless, and gable roof rigid frame. Buildings can be tailored for practically any industrial or commercial need.

For more details circle NED-956 B8 on enclosed inquiry slip

AVAILABLE...
for more than 10,000 industrial pumping applications
DEMING PUMPS

MOTOR MOUNT CENTRIFUGAL PUMPS... In ranges from 1½" to 5" discharge. Capacities to 1200 gallons per minute . . . motors from 1 to 30 horsepower.

VERTICAL TURBINE PUMPS... dependable, minimum operational costs and maintenance. Available with bowl sizes from 4 to 16 inches in complete range of capacities up to 3500 gallons per minute.

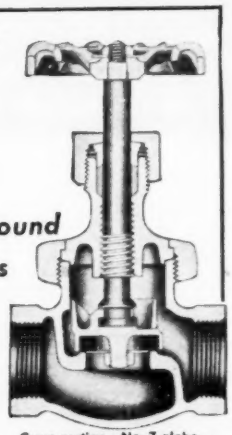
SUMP PUMPS... Vertical Sump pumps meet a wide variety of heavy, intermediate and light duty conditions. Standard units available for wet and dry pit service.

Described above are only three types in the big, complete Deming line. For specs, data and catalogs on any pump or water system application, write:

THE DEMING COMPANY
520 BROADWAY • SALEM, OHIO

For more details circle NED-957 B8 on enclosed inquiry slip

Easy-to-repair brass valves
CRANE
Composition disc—150-pound
Globes • Angles • Checks



Cross section—No. 7 globe—screwed ends

- Interchangeable disc-holder feature cuts down time to minutes.
- Handle 7 services with only 2 types of composition disc – steam, hot water, cold water, gas, air, oil, gasoline.
- Can be repacked under pressure when wide open.
- Sizes: globe, angle—⅛ to 3 in.; lift check, ¼ to 3 in. Screwed or flanged ends.

For complete information, get Circular AD-2222 from Crane Representative or write to address below.

Replacing preassembled disc and holder

CRANE VALVES & FITTINGS
PIPE • PLUMBING • KITCHENS • HEATING • AIR CONDITIONING
Since 1855—Crane Co., General Offices: Chicago 5, Ill.
Branches and Wholesalers Serving All Areas

For more details circle NED-958 B8 on enclosed inquiry slip

NOW...Clean oil reservoirs and systems without stopping production
. . . with Houghton's
GUM SOLVENT B

Stop frequent shutdowns, constant service calls, repeated part replacement. Eliminate expensive repairs, long lay-ups. Clean your oil system while it works, with Houghton's Gum Solvent "B".

It cleans pumps, bearings, gear boxes, crankcases, pipe lines, control valves, cylinders and reservoirs. It removes oxidized oil, gummy deposits, water sludge, resins, contaminants. Just use up to 5 per cent of oil reservoir capacity, operate for 150 hours and drain.

Now used by hundreds of companies. Get full information from E. F. Houghton & Co., 303 West Lehigh Avenue, Philadelphia 33, Pa.

GUM SOLVENT B
. . . a product of
E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO
Ready to give you on-the-job service . . .

For more details circle NED-959 B8 on enclosed inquiry slip

Norgren
AUTOMATIC-DRAIN
Air Line Filters

BETTER PROTECTION for Your Air Equipment

- Eliminates Cost of Manual Draining
- Effective Removal of Damaging Liquids and Solids
- Wide Operating Pressure and Temperature Ranges—5 psi to 250 psi, and to 200° F
- 30 Models—Transparent or Metal Bowls—¼", ⅜", ½", ¾", 1"

WRITE FOR NEW NO. 900 CATALOG

C. A. NORGREN CO.

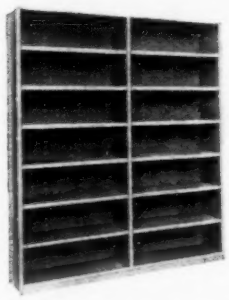
3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

For more details circle NED-960 B8 on enclosed inquiry slip

FASTEST ERECTED, STRONG, SAFE

DELUXE BOLTLESS STEEL SHELVING

LOWERS INSTALLATION COST



HERE'S WHY:

- BOLTLESS SHELF BRACKET
  Use no tools for easy adjustability
- 1-PIECE I-BEAM-TYPE UPRIGHT
  Faster erection, rigid assembly
- BUILT-IN SHELF REINFORCING
  Reinforcing bars factory imbedded
- SNAP-IN DIVIDERS
- CLIP-ON BIN FRONTS
- FLOOR ANGLE
  Shelving erects vertically, in place

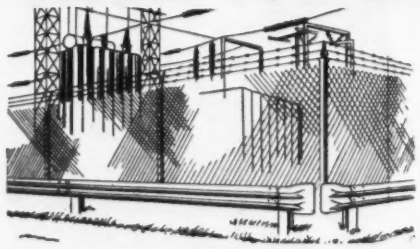
Call your local Deluxe dealer or write for new Catalog #30

DELUXE METAL FURNITURE CO., Warren 2, Pa.
A DIVISION OF ROYAL METAL MANUFACTURING CO.

DELUXE
STEEL SHELVING

For more details circle NED-961 B8 on enclosed inquiry slip

STOP CARELESS DAMAGE TO OUTSIDE EQUIPMENT



ANCHOR GUARD RAIL

High impact resistance combined with neat, compact design makes Anchor Guard Rail the ideal way to protect transformers, building corners, pipes, fences and other expensive property. Anchor Guard Rail is erected by Anchor's own men; every job is backed by Anchor's 66 year reputation. Call your local Anchor office today for a free estimate, or write: ANCHOR FENCE, 7002 Eastern Avenue, Baltimore 24, Maryland.

Anchor Fence®

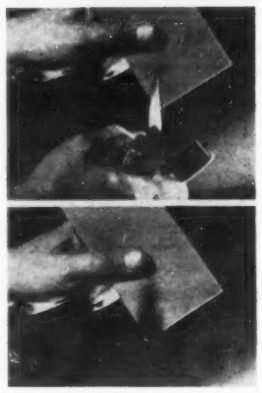
Division of ANCHOR POST PRODUCTS, Inc.

Plants in: Baltimore, Md.; Houston, Texas; and Whittier, California.
Sold direct from Factory Branches and Warehouses in all principal cities.

For more details circle NED-962 B8 on enclosed inquiry slip

New Processes & Materials

PLASTIC LAMINATE
retards flame and resists arcs



Flame retardant property of Insurok Grade XT-901 plastic laminate is demonstrated by lower photo which shows only a slight charring after being exposed to a cigaret lighter flame. The paper base material is self-extinguishing and has no after-glow. Electrical characteristics of the red colored material exceed NEMA values for XXXP phenolic laminates. Electrical and arc resistance properties are retained after exposure to high humidity or immersion. Fabrication is by hot punching equipment. Its low cold flow assures retention of spacing in riveted assemblies. It is also suited for high voltage applications such as "flyback transformer" terminal boards. Made by **Richardson Co.**, 2765 Lake St., Melrose Park, Ill.

For more details circle NED-963 B8 on enclosed inquiry slip

TIN & LEAD PLATING
deposited singly or in combination

Tin and lead can be plated singly, or in combination in any desired proportion using two slightly alkaline Dalic plating solutions. High lead content alloys (93 per cent) are suitable for bearing applications; 60-40 tin-lead alloys are satisfactory for components requiring subsequent soldering. Intermediate percentages for special purposes are achieved by mixing the solutions in proper volumetric proportions. When used with company's selective area plating equipment, high current densities achieve dense deposits. Fine grained tin can be burnished to a high gloss with cotton batting. Available from **Marlane Development Co.**, Dept. 201, 153 E. 26th St., New York 10, N. Y.

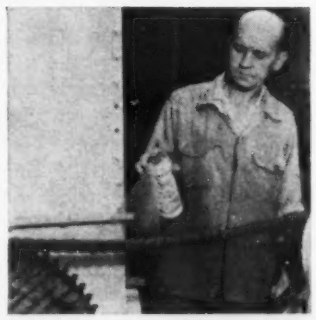
For more details circle NED-964 B8 on enclosed inquiry slip

GLASS-SUPPORTED TEFLON TAPE
has copper foil on one or both sides

With copper foil bonded to one or both sides, glass-supported Teflon tape can be used as etched flexible cable harnesses for missiles and aircraft, or as flexible connectors in printed circuit stacks for computers and controls. Copper foil can be applied in weights of 1 or 2 oz per sq ft to one or both sides of cementable grades GB-108T, 116T, or 128T. Overall thicknesses run from 0.006 to 0.016 in. Excellent shock and vibration resistance is combined with high mechanical strength and dimensional stability. Electrical properties are excellent, and tape can be bent to ¼-in. radius. Material is furnished on developmental basis in up to 30 ft lengths and widths up to 6 in. Lengths of 100 ft or longer are to be produced soon. Made by **Continental-Diamond Fibre Corp.**, Newark 107, Del.

For more details circle NED-965 B8 on enclosed inquiry slip

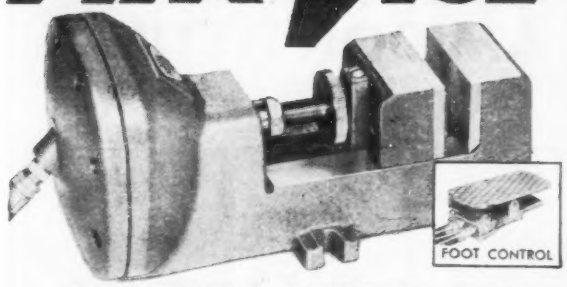
CHAIN LUBRICANTS
packaged in aerosol containers



Rust preventives and antiwear additives are contained in two chain lubricants, packaged in pressurized aerosol spray containers. Nu-Aero heavy duty high viscosity lubricant contains ultrafine graphite and is used on heavy industrial equipment with moderate and slow speed chains. Lighter viscosity Nu-Aero Chain Life roller chain lubricant with molybdenum disulphide is intended for small size and high speed chains operating at up to 600° F. Made by **Pressure Products Co.**, Box 342-A, West Chester, Pa.

For more details circle NED-966 B8 on enclosed inquiry slip

Speedy AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... $44.00

SPEEDY 1-TON AIR PRESS
Does the work of expensive presses! Power factor 15 times air line pressure. 5-inch throat; Ram 0 to 5" stroke ⅝"; table 5" x 5". Operated by foot or fingertip controls. $85.00

Order from Your Supplier or Write for Air Tool Catalog

W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

For more details circle NED-967 B8 on enclosed inquiry slip

The Lepel line of induction heating equipment represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating.

If you are interested in induction heating you are invited to send samples of the work with specifications. Our engineers will process and return the completed job with full data and recommendations without any cost or obligations.

TYPICAL INDUCTION HEATING APPLICATIONS

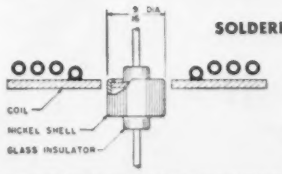
HARDENING DIESEL FUEL INJECTOR

Restriction of heat to end of holder body for fuel injector permits hardening of face to provide required resistance to deformation without hardening the threads. Coil design shown provides uniform temperature for hardening despite holes in face.

REMOVING RUBBER FROM STEEL

Induction heating develops uniform temperature at steel-rubber interface destroying bond for easy separation. Steel and rubber may similarly be salvaged from mounting brackets, shock absorbers, etc.

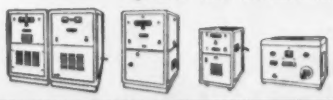
SOLDERING TRANSISTOR ASSEMBLIES



Concentrator-type coil creates high intensity, restricted heating at joint of nickel shell and tinned glass, thus causing solder flow for permanent seal

Electronic Tube Generators from 1 kw to 100 kw.
Spark Gap Converters from 2 kw to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information.



All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

LEPEL HIGH FREQUENCY LABORATORIES, INC.
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

For more details circle NED-968 B8 on enclosed inquiry slip

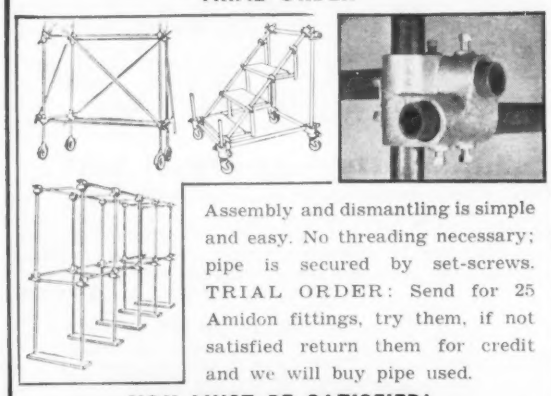
MAKE YOUR OWN

Storage & Pallet Racks · Adjustable & Frame Scaffolds · Portable Docks · Rolling Steps · Rolling & Stacking Pallets · Shelter & Work Bench Frames, etc.

with STRONG, MALLEABLE, TOUGH

AMIDON FITTINGS

(and standard 1-inch pipe)
send for free literature or
TRIAL ORDER



Assembly and dismantling is simple and easy. No threading necessary; pipe is secured by set-screws. TRIAL ORDER: Send for 25 Amidon fittings, try them, if not satisfied return them for credit and we will buy pipe used.

YOU MUST BE SATISFIED!

AMIDON ENGINEERING CO.

ELYRIA 20, OHIO

For more details circle NED-971 B8 on enclosed inquiry slip

LOW-COST HUMIDITY CONTROL for only pennies a day with Bahnson UNIT HUMIDIFIERS

TYPE E

Now any size plant can afford this inexpensive humidification and insure profits

Guaranteed water or steam units have low first cost, low operating cost. Can be installed singly or in groups. Require no floor space, little maintenance. High capacity. Automatic control.

FREE! ILLUSTRATED BOOKLET
Catalog details full line.
Write for it today!

N-5

Bahnson Company

WINSTON-SALEM, N. C.

For more details circle NED-972 B8 on enclosed inquiry slip

For more details circle NED-973 B8 on enclosed inquiry slip

New Literature & Catalogs

Bending of Pipe & Structurals

Wallace Supplies Mfg. Co.—"Please Take a Peek" is title of 36-page bulletin which describes equipment for bending pipe, tubing, and structural shapes. Machines and the work produced on them are shown. Rotary, ram, and rolling type machines are discussed.

For more details circle NED-974 B8 on enclosed inquiry slip

Miniature Clutches & Brakes

Autotronics, Inc. — A complete line of miniature and subminiature electromagnetic clutches and brakes in standard and custom models is offered in 28-page illustrated catalog. Cutaway drawings, engineering data, schematic diagrams, performance curves, and other technical information is included to aid in selecting and applying the proper unit for any drive requirement.

For more details circle NED-975 B8 on enclosed inquiry slip

Pneumatic Tools

Doeden Tool Corp.—Rotary vane, air-driven hand tools for contour finishing; die grinding; finishing molds, patterns, forgings, and castings; and for deburring machined parts are detailed in illustrated 4-page Bulletin 101.

For more details circle NED-976 B8 on enclosed inquiry slip

Polyethylene Laboratory Ware

Schaar & Co.—Chemically inert, inexpensive, and unbreakable polyethylene laboratory ware is offered in a wide range of types and sizes in 16-page illustrated Catalog 57P. Dimensions and prices are given for thousands of items.

For more details circle NED-977 B8 on enclosed inquiry slip

Precision Potentiometers

George Rattray & Co.—28-page Catalog GR107 contains detailed specifications of a broad line of miniature and standard precision potentiometers for use in all types of equipment. Dimensioned drawings are included for each device.

For more details circle NED-978 B8 on enclosed inquiry slip

Drives & Motors

Reliance Electric & Engineering Co.—"Sky High to Ocean Blue" is title of 12-page booklet which discusses and illustrates the specialized drives and motors made by this company. Covered are many "firsts" for shipboard use, integral ac motors up to 400 hp, dc units up to 1000 hp, dc and ac generators and motor-generator sets, gearmotors, and variable speed drive systems and their controls.

For more details circle NED-979 B8 on enclosed inquiry slip

Optical Comparators

Jones & Lamson Machine Co.—36-page Catalog 5700 describes and specifies several models of optical comparators. It covers fixtures, standard charts, special charts and fixtures, accessories, and lens data. Comparators are used to inspect all kinds of parts and products, from tiny screw threads to involute gears, from pen points to jet engine compressor discs. Measurements as fine as 0.0001 in. can be made.

For more details circle NED-980 B8 on enclosed inquiry slip

Spiral Wound Metal Gaskets

Garlock Packing Co.—Spiral wound strips of V-shaped preformed stainless or cold rolled steel alternated with layers of asbestos or Teflon comprise Guardian spiral wound metal gaskets covered in 12-page Bulletin AD-104. Gaskets are used against steam, oils, gases, and liquids including most chemicals in high pressure, high temperature applications.

For more details circle NED-981 B8 on enclosed inquiry slip

Straight Side Crankshaft Presses

Clearing Machine Corp.—48-page Bulletin 234 on Series S straight side crankshaft presses contains sections on construction features, accessory equipment, press selection, specification tables, and special construction. Presses are cataloged in 50 to 300-ton capacities, with bed areas ranging from 36 x 24 to 120 x 66 in. Single or twin end crank drives are available.

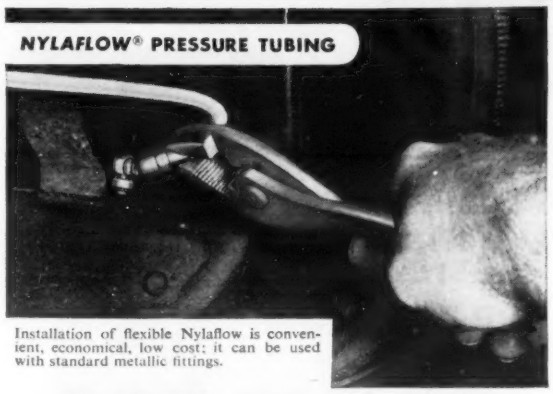
For more details circle NED-982 B8 on enclosed inquiry slip

Tool Holders

Erickson Tool Co.—Photos, exploded views, and section and dimensional drawings of the Quick Change holder line are found in 8-page revised catalog. They can be used on milling machines, boring mills, radial drills, turret lathes, and other machines.

For more details circle NED-983 B8 on enclosed inquiry slip

NYLAFLOW® PRESSURE TUBING



Installation of flexible Nylaflow is convenient, economical, low cost; it can be used with standard metallic fittings.

NYLAFLOW's unique characteristics improve performance, lower costs

Nylaflow is a tough, resilient polyamide tubing—different from any other tubing. Its superior performance has proved advantageous for:

Lubrication lines • Hydraulic lines • Air or vacuum lines • Oil and fuel lines • Beverage and syrup lines • Caustic or solvent lines

NYLAFLOW gives you:
- High burst strength at low cost
- Outstandingly long flex and vibrational life
- Abrasion and crush resistance
- Resistance to solvents, oils, alkalis, hydraulic fluids
- Non-toxic, non-corrosive, fungus resistant properties
- Installation with standard fittings
- Flexibility—eliminating prebending
- Form stability—can be permanently bent with heat

Nylaflow Pressure Tubing is available in short time burst ratings of 1000 psi.—Type T, and 2500 psi.—Type H. Write today for new Nylaflow Bulletin.

THE POLYMER CORPORATION OF PENNA.
Reading, Pennsylvania
Export: Polypenco, Inc., Reading, Pa., U.S.A.

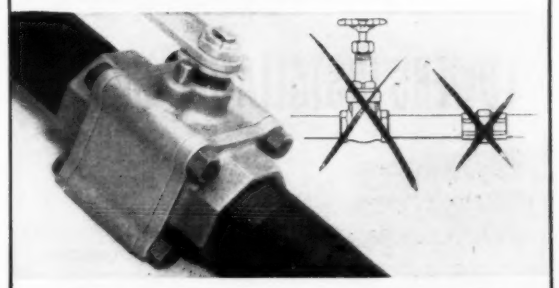
POLYPENCO

POLYPENCO Nylon, POLYPENCO Teflon* NYLAFLOW® and NYLATRON® GS
*DU PONT TRADEMARK

For more details circle NED-984 B8 on enclosed inquiry slip

WORCESTER'S

Econ-O-"Miser" Ball Valve* cuts operating costs up to 40%



SERVES AS BOTH A VALVE AND UNION IN THE LINE

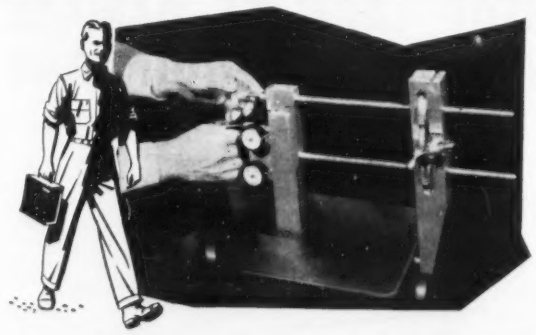
If you replace only 100 one inch 150 pound gate valves a year in your plant, the Econ-o-"miser" can save you at least $659. and up to $884. a year on this size alone. Easy in-line maintenance should replacement of parts become necessary . . . without touching the pipe ends, valve center section can be removed, seating surfaces or "O" rings replaced, and this unit re-installed in a matter of minutes.

For more information on this and Worcester's outstanding line of BALL, GATE, or NEEDLE VALVES contact:

WORCESTER VALVE CO., Inc.

18 Parker Street, Worcester, Mass. *Pat Pending

For more details circle NED-985 B8 on enclosed inquiry slip



HARDNESS TESTER

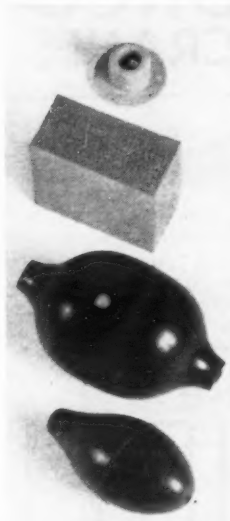
compact and exact!

Inspectors simply carry this small, lightweight hardness tester to the work — instead of transporting heavy work pieces to a testing bench. Yet this Riehle portable hardness tester gives Rockwell readings as precise as any bench-mounted tester. Without obligation, let a Riehle representative prove this in your plant on certified calibrated specimens. Then try out on your own materials. Write Dept. NED-258.

Riehle TESTING MACHINES
A DIVISION OF
American Machine and Metals, Inc.
EAST MOLINE, ILLINOIS

For more details circle NED-986 B8 on enclosed inquiry slip

RUBBER



developed and shaped to fit your specifications

MOLDED RUBBER
When you need small molded rubber parts—see Faultless. Complete facilities for mass production of bulb goods, stopples, other quality molded parts.

SPONGE RUBBER
Your best source for sponge rubber. Available in a wide choice of thicknesses and densities.

COLOR SPECIALISTS
Color is increasingly important in industrial manufacturing. As color specialists we can match almost any shade desired.

LABORATORY FACILITIES
Let us compound your rubber parts to meet your requirements. Complete laboratory facilities, expert chemists.

For Full Details Write Dept. I. The Faultless Rubber Company, Ashland, Ohio

FAULTLESS

For more details circle **NED-987 B8** on enclosed inquiry slip

USSSCO's **new** *all Plastic* **SAF-I-SPEC**

2 sizes Large or Small for men and women

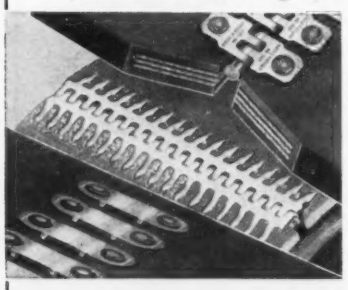
new styling assures wearer acceptance
new design Acetate frames provide greater strength
new light-weight for comfort (new SAF-I-SPECS weigh less than one ounce)
new colors

Comfortable spatula temples . . strong rugged brow-bar . . with or without side shields . . velvet-soft nose piece . . lens locks in place securely . . easily removed without tools . . meets Federal specifications.

UNITED STATES SAFETY SERVICE CO.
DIV. E-2, 1535 WALNUT ST.
KANSAS CITY 8, MISSOURI
BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle **NED-988 B8** on enclosed inquiry slip

ARMSTRONG-BRAY CO.
For Belt Joining ANYWHERE



WIREGRIP Belt Hooks
6 sizes on patented double aligning cards no card end waste. Applied with any standard lacer.

HINGE PLATEGRIP Fasteners
for separable conveyor belts of from ⅜" to ½" thickness, any width. Permit instant changes of belt length.

STEELGRIP Flexible Belt Lacing
11 sizes for light conveyor and power transmission belts from 1/16" to ⅝" thickness, any length. Applied with hammer anywhere.

PLATEGRIP Fasteners
make smooth water and dust-tight joints in conveyor belts of any width, from ¼" to 1½" thick. Permit natural troughing.

Write for Catalog

ARMSTRONG BRAY & CO.
5362 Northwest Highway • CHICAGO 30, U.S.A.

For more details circle **NED-989 B8** on enclosed inquiry slip

New Processes & Materials

WATERLESS HAND CLEANER
will not dry out or defat skin

U. S. Armed Forces standards are met by Ply waterless hand cleaner which derives cleansing action from a water soluble synthetic wetting agent. The low-alkaline cleaner, with a pH of 8 or less, has no adverse affects on rubber or fabrics and will not dry out, defat, or irritate the skin. Product will promote cleanliness in remote plant areas, or those not conveniently laid out for washroom facilities. It can be used with or without water to remove hard-to-get-out soils. Cleaner is offered in cream form, in standard 1-lb jars or in 80-oz units for use with wall dispensers. Made by **Milburn Co.**, Dept. N, 3246 E. Woodbridge, Detroit 7, Mich.

For more details circle **NED-990 B8** on enclosed inquiry slip

ROOF COATING
applied in heat or cold

Snowbird all-weather roof coating can be applied to a wet or dry roof in extreme heat or cold. Also a fire retardant, it is a black suspended, homogenous, plastic coating that adheres well and prevents or delays ignition of roof surfaces when subject to spark or flames. Material can be used on an entire roof or for permanently patching blisters or holes on built-up roofs. Application is with brush or spray without heating or thinning. Made by **Maintenance Engineering Co.**, 16 W. Johnson St., Philadelphia 44, Pa.

For more details circle **NED-991 B8** on enclosed inquiry slip

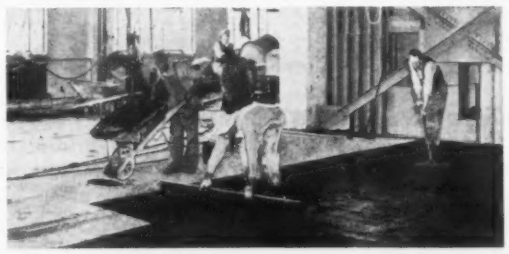
CLEAR PROTECTIVE COATING
usable on nonferrous metals

An almost invisible protective coating is given to aluminum, magnesium, copper, chrome, and other nonferrous metals with Water-White Clear Coating FF-111. In addition to affording protection, it will also restore the color and gloss of faded paint or enamel films. It does not peel or turn color. This high-gloss polymeric finish dries to touch in 5 min and is hard in 30 min. It provides protection against oxidation, pitting, staining, and tarnishing. Made by **Magnus Chemical Co.**, Finishes & Coatings Div., Dept. NED, South Ave., Garwood, N. J.

For more details circle **NED-992 B8** on enclosed inquiry slip

FLOOR RESURFACER
is dustfree, skidproof, resilient

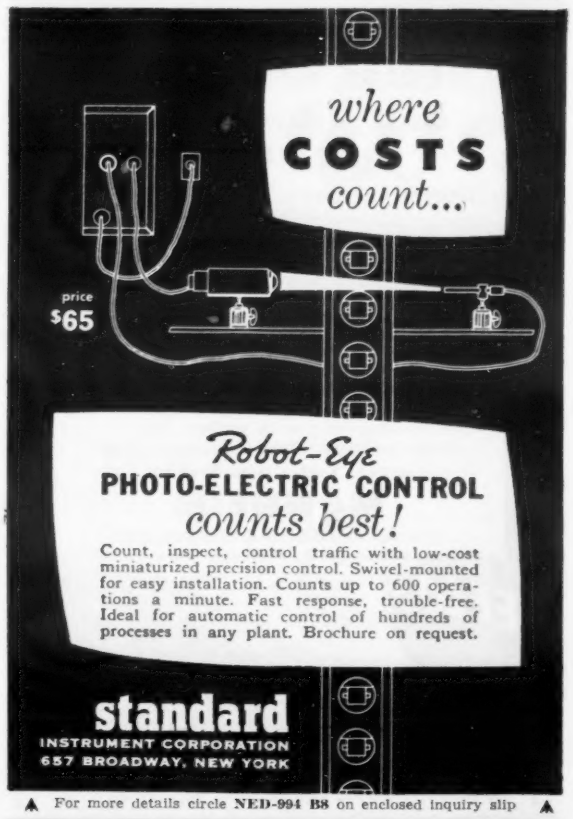
Applicable to existing concrete and wooden floors, sidewalks, and stairs, combination of Lifekote Bond and Unicrete resurfacer provides a durable, dustfree,



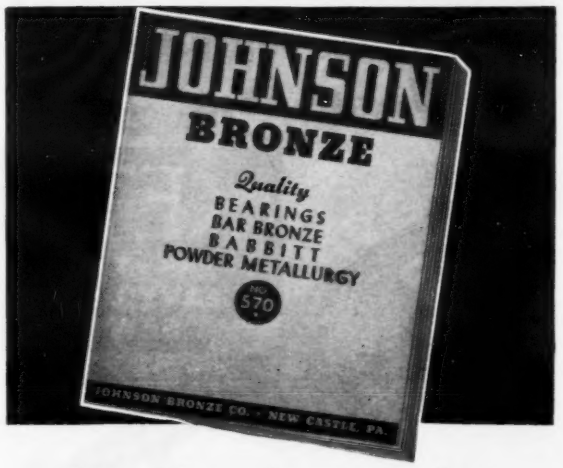
skidpoof, resilient surface. Usable 12 hours after application, this black surface is comfortable to stand on, and it withstands the impact of continuous heavy trucking without chipping or crumbling. It is also odorless and fire resistant.

Resurfacing operation consists merely of cleaning floor, coating it with Lifecoat Bond, and applying a ½-in. thickness of Unicrete. Leveling and smoothing are relatively simple, and maximum smoothness is obtained by troweling 4 or 5 hours after leveling. Made by **Tropical Paint Co.**, 1150-1300 W. 70th St., Cleveland 2, Ohio.

For more details circle **NED-993 B8** on enclosed inquiry slip



For more details circle **NED-994 B8** on enclosed inquiry slip



New Bearing Catalog
gives complete specifications for over 1700 stock bronze bearings

This catalog covers the largest range of sizes available in stock bronze bearings. From the many types and sizes available, there is a bearing for almost any application.

If you would like to enjoy the advantages of economy and quick delivery which stock bearings provide, you should investigate the Johnson line described in Catalog 570. For your free copy, write Johnson Bronze Company, 580 S. Mill Street, New Castle, Pa.

For more details circle **NED-995 B8** on enclosed inquiry slip

NEW

J-E

Industrial
SOLENOID VALVES

Low in cost
Unusually Dependable
Proven Design Features

The new Jackes-Evans "SERIES J" Solenoid Valves for industrial uses incorporate the accepted fine construction and operating features found in standard J-E valves, and are offered at an exceptionally low price.

Use them for the control of air, water, brines, light oils, low pressure steam, industrial and L.P. gases as well as other non-corrosive fluids. Pilot operation. Maximum pressure differential of 150 psi. Mount in any position. Only two moving parts. Exceptionally durable synthetic diaphragm. Thoroughly proven in millions of test cycles and *on the job* in a wide variety of applications.

You'll be amazed at their low cost, pleased with their long life and trouble free operation. Write for Bulletin J-57.

Controls Division
JACKES EVANS MANUFACTURING COMPANY
4427 Geraldine Ave. • St. Louis 15, Mo.

For more details circle **NED-996 B8** on enclosed inquiry slip

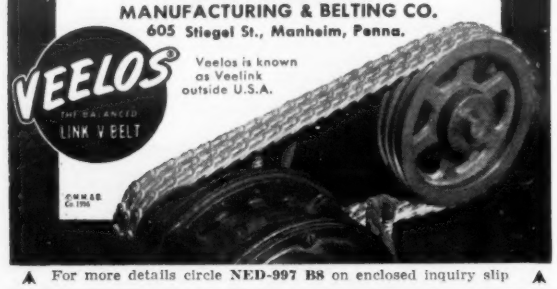
Veelos Knocks Out Belt Vibration... Up To 90%!

HERE'S PROOF! With an electronic vibration analyzer, your Manheim Veelos representative can measure the exact vibration in your machines. This test is absolutely free and is offered as conclusive proof that Veelos Adjustable V-Belts are better for your drives.

TEST YOUR BELTS! Test Veelos belts against the V-belts you're now using—convince yourself, in this 15 minute test, that Veelos cuts V-belt vibration up to 90%. Smooth running Veelos saves you money by cutting down bearing wear, work spoilage, etc.

Write for free Vibration Demonstration or Free Veelos Data Book to:

MANHEIM
MANUFACTURING & BELTING CO.
605 Stiegel St., Manheim, Penna.



For more details circle NED-997 B8 on enclosed inquiry slip

Start where you please— SAW with ease . . .

Zips through aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel with minimum effort, maximum speed. Its performance is outstanding on metal laminates such as Mirawal, Metalwal, Met-L-Wood and Amorply.

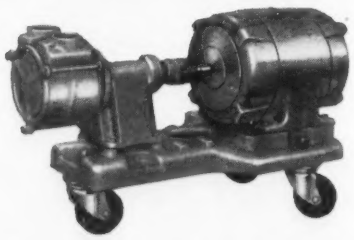
- Rugged 2-in. diameter saw blades give full 3/8" depth of cut.
- Powered with heavy-duty industrial-type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.
- Leaves accurate, smooth milled edge that requires no sanding or finishing.

Write for Catalog E-26

THE KETT TOOL COMPANY
5051 Madison Road
Cincinnati 27, Ohio

For more details circle NED-998 B8 on enclosed inquiry slip

Now—a better pump for tough transfer jobs



Goulds self-priming Liquid Ring Pump, Fig. 2520

Pumps liquid ... pumps air ... pumps liquid *and* air

The positive and fast self-priming ability of this new pump makes it ideal for transfer and similar services.

No repriming, no air binding. Even with loops or leaks in your suction line, the pump's high air handling capacity keeps the liquids moving.

In a volute casing, the impeller produces centripetal and liquid piston actions to handle any combination of air and liquid.

Goulds Fig. 2520 is available in all iron, or in stainless steel construction for corrosive service; offered as a mobile unit (illustrated), pump-motor unit, or pump only for V-belt drive. Capacities to 60 GPM, heads to 80 ft.

Write for Bulletin 725.6.

GOULDS PUMPS FOR INDUSTRY

Main Office and Works
GOULDS PUMPS, INC.
Seneca Falls, New York
Branches and Representatives in all principal cities

For more details circle NED-999 B8 on enclosed inquiry slip

New Literature & Catalogs

Floor Care

Masury-Young Co.—"What Every Executive Should Know About This Vital One-Thousandth of an Inch" is title of an illustrated 32-page booklet on the latest developments in the care of asphalt, rubber, vinyl, and cork tile, and concrete, terrazzo, and marble floors. How flooring materials affect maintenance is detailed. Line of floor dressings and equipment is described.

For more details circle NED-1000 B8 on enclosed inquiry slip

Flooring Materials

B. F. Goodrich Flooring Co.—Cushioned rubber, Koroseal vinyl, fire retardant Koroseal, and asphalt floor tile; molded rubber cove base; stair treads; edging strip; chair rail; and thresholds are typical of the flooring products described and shown in 1958 Catalog SC-58. Included are definitions, specifications, features, and latest colors and patterns.

For more details circle NED-1001 B8 on enclosed inquiry slip

Heat Exchangers

American-Standard, Ross Heat Exchanger Div.—Corrosion resistant copper alloy core assembly, baffles with flanged lip at each tube hole for tight tube fit, and three-position stamped metal feet are features of Type BCF heat exchangers covered in illustrated Bulletin 1.1K6. The 8-page issue gives specifications of 46 sizes in one, two, and four-pass designs.

For more details circle NED-1002 B8 on enclosed inquiry slip

Data on Electrochemicals

Norton Co.—16-page illustrated booklet "Norton Electrochemicals . . . Gifts of the Firebird" presents the physical properties of 23 products made in high temperature electric furnaces. Tables, charts, application information, sizes, and physical characteristics are presented on such materials as silicon carbide, zirconium oxide and carbide, calcium zirconate, boron carbide, boron, and other borides, carbides, nitrides, and fused oxides.

For more details circle NED-1003 B8 on enclosed inquiry slip

Supervisory Control Equipment

General Electric Co.—Functions ranging from opening and closing of switches and valves to adjustments of speed, voltage, or load are performed by supervisory control equipment described and illustrated in 16-page Bulletin GEA-6603. It can be used to control and supervise any piece of electrical apparatus which has provisions for local control.

For more details circle NED-1004 B8 on enclosed inquiry slip

Protective Gloves & Clothing

Jomac Inc.—New lines of polyvinyl chloride impregnated industrial clothing, gloves, and aprons are described in three illustrated 2-page bulletins. Designed to provide protection for workers in chemical, petroleum, drug, food, and other industries, these items afford lightness in weight, flexibility, and resistance to oils, chemicals, and abrasion.

For more details circle NED-1005 B8 on enclosed inquiry slip

Variable Speed AC Drive

Louis Allis Co.—Details of the Select-A-Spede adjustable speed drive in ratings from 5 to 200 hp are presented in 12-page Bulletin 2000. This variable voltage DC drive package uses alternating current as its power source. Variable speed ranges up to 220 to 2625 rpm are possible in the 5 to 15 hp range, while speeds of 220 to 1925 rpm can be obtained with the 60 to 200 hp models.

For more details circle NED-1006 B8 on enclosed inquiry slip

Abrasive Mounted Wheels

Bay State Abrasive Products Co.—Information relative to grinding action, wheel markings, grade, bond types, abrasive types, structure, grain size, spindles and treatments of abrasive mounted wheels is given in 30-page Catalog 237. Wheels are made with vitrified, resinoid, rubber, cork resinoid, Bayflex (resin and cotton fiber), and metal bonds.

For more details circle NED-1007 B8 on enclosed inquiry slip

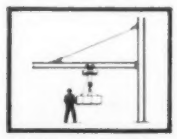
Low-Level Condensers

Schutte & Koerting Co.—Line of low-level condensers for condensing steam under vacuum at ground level are widely used in industrial processes and in connection with steam engines and turbines. Illustrated 8-page Bulletin 5AB contains application, construction, and operation information for both eductor and multijet condensers.

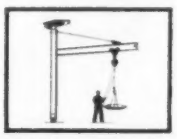
For more details circle NED-1008 B8 on enclosed inquiry slip

MOTOR DRIVEN or HAND OPERATED
CONCO JIB CRANES

Where space and budget are both limited, CONCO self-supporting, wall and mast-type jib cranes have a wide application—on the loading platform, in the warehouse, machine shop or foundry. CONCO jib cranes may be furnished with CONCO hand or electric hoists and are available with floor plate or embedded mounting.



CONCO wall bracket jib crane



CONCO mast-type jib crane

CONCO ENGINEERING WORKS
Division of H. D. CONKEY & COMPANY
57 Grove Street • Mendota, Illinois
AFFILIATES Conco Engineering Works-Domestic Heating Equipment
Conco Building Products, Inc., Brick, Tile, Stone

For more details circle NED-1009 B8 on enclosed inquiry slip

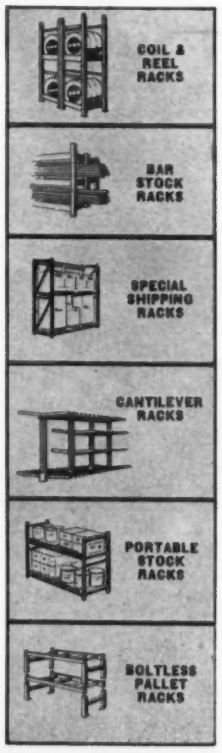
Stacking Problem? call EMI

anything can be
"well stacked"
or shipped on EMI racks

Big or little, strong or fragile, *anything* stacks or ships better on EMI quality racks. They protect stock, cut handling costs and speed inventory.

EMI RACKS are made of strong, tubular steel and are adjustable to fit any space or unit load. Special racks designed to your specifications with field engineering service on any installation.

Write for our illustrated catalog before you plan additional storage space or the purchase of stacking or shipping equipment.

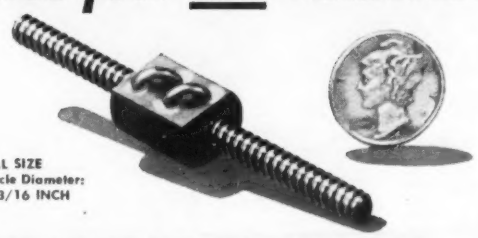


Well Stacked Racks for Industry

EQUIPMENT MFG. INC.
21566 HOOVER ROAD DETROIT 5, MICHIGAN

For more details circle NED-1010 B8 on enclosed inquiry slip

Here's your new ANSWER



ACTUAL SIZE
Ball Circle Diameter:
ONLY 3/16 INCH

WORLD'S SMALLEST ball/bearing SCREW SOLVES CRITICAL MINIATURE POSITIONING/CONTROL PROBLEMS

An unprecedented achievement in minimum size and weight, maximum efficiency and service life for ultra-precise controls. *It's another first from Saginaw—and the possibilities it opens up for improved electrical and electronic controls are limited only by your imagination!* • *The Saginaw b/b Screw is so compact and light, you can save substantially on space and weight.* • *It's so efficient,* (over 90%) you can use much smaller motors and gear boxes. • *It's so precise,* you can position components within .0005 inch per inch of travel. • *It's so dependable,* you can rely on long life even in adverse environments. • Phone or write today for 1958 Engineering Data Book, or see our section in Sweet's Product Design File.

Saginaw b/b Screws

SAGINAW STEERING GEAR DIVISION OF GENERAL MOTORS • SAGINAW, MICH.

▲ For more details circle NED-1011 B8 on enclosed inquiry slip ▲

every day, designers are discovering new ways to make products better, more efficient...with

Precision manufactured from DuPont Nylon Resin to close tolerance of ±.001 on diameters and .0005 on sphericity, Ace Nylon Balls give **design flexibility** and **production economy.** Light in weight . . . tough at low temperatures . . . stable at high temperatures . . . resistant to corroding chemicals such as sulphuric acid, etc. . . almost abrasionproof . . . these mass-produced balls have hundreds of industrial applications. Come in 14 standard sizes from 1/8" to 3/4". Complete facilities for fabrication of plastic parts for all industries. Estimates submitted promptly on receipt of blueprints or specifications.

Write for samples, bulletin, price list TODAY.

ACE PRECISION NYLON BALLS

ACE PLASTIC COMPANY *Extrusion Molders and Fabricators*

91-28 Van Wyck Expressway, Jamaica 35, N. Y. • JAmaica 3-5500

▲ For more details circle NED-1012 B8 on enclosed inquiry slip ▲

Today, hundreds of manufacturers depend on General Plate's years of processing experience for Truflex formed parts that control, compensate and indicate temperature!

Here's why:

- **Truflex parts** and sub-assemblies are engineered to your specifications, ready for installation.
- **Every piece**—in lots of 10 or 10,000 — is a duplicate of the original . . . eliminating rejects and costly assembly adjustments.
- **Production problems,** special equipment, and prolonged experimental work are all eliminated when you use Truflex parts.
- **If you prefer** to make your own parts, Truflex Thermostat Metals are available in extra long coils or flat strips manufactured to your exact specifications.

Send us a drawing of your thermostat metal parts and let us show you what Truflex Thermostat Metal can do for you.

METALS & CONTROLS CORPORATION
General Plate Division 1802 Forest Street, Attleboro, Mass.

FIELD OFFICES: NEW YORK, CHICAGO, DETROIT, INDIANAPOLIS, MILWAUKEE, PASADENA

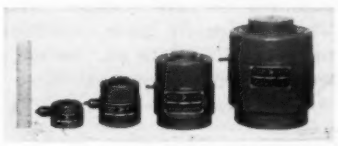
▲ For more details circle NED-1013 B8 on enclosed inquiry slip ▲

PAINT ROLLER COVER
lint-free type for various finishes

Enamels and other finishes can be applied on smooth surfaces with this lint-free paint roller cover made of foam plastic. The polyurethane plastic gives a smooth finish with a gloss paint on such flat surfaces as putty coat and sand-finish plasters. It can also be used with enamels, oil-base and latex paints, varnish alkyd enamels, and flat finishes. Seamless cover is resistant to paint thinners and paints close to wood trim, ceilings, and corners. Made by **E Z Paintr Corp.,** Plastics Div., 4051 S. Iowa Ave., Milwaukee 7, Wis.

▲ For more details circle NED-1014 B8 on enclosed inquiry slip ▲

STRAIN GAGE LOAD CELLS
measure weights and forces



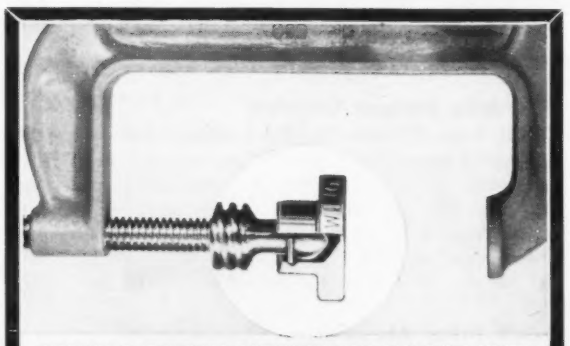
Small hermetically sealed housings contain precision strain gage load cells for electrical measurement of forces and weights. Capacities of 25,000, 50,000, and 100,000 lb are available in presently available cells. Complete line of nine models, soon to be offered, will cover a range from 500 to 200,000 lb. Construction permits 225 per cent overload without affecting calibration. Cell cable with stainless steel jacket has zero moisture absorption. Made by **Revere Corp. of America,** Cox & Stevens Electronic Scales Div., Dept. 73, Wallingford, Conn.

▲ For more details circle NED-1015 B8 on enclosed inquiry slip ▲

CURRENT METER
retains reading indefinitely

Reading taken at any desired instant is retained indefinitely, or until noted, by this memory-type current meter. Readings can be taken at any point on the scale —and not necessarily at maximum reached by the signal. Unit is essentially a sensitive panel meter with rear-mounted solenoid that is normally energized so that its plunger is retracted. Operation of solenoid can be reversed so that coil is normally de-energized. Meter is available in almost any sensitivity range, from a few microamperes or millivolts to 50 amp or 500 v, ac or dc. It has a 4½ in. rectangular plastic case. Solenoid operates on 100 v dc and about 30 ma. Made by **Assembly Products, Inc.,** Chesterland 61, Ohio.

▲ For more details circle NED-1016 B8 on enclosed inquiry slip ▲



GUARANTEED NEVER TO COME OFF!

Patented Perma Pads Now on All Wilton C Clamps!

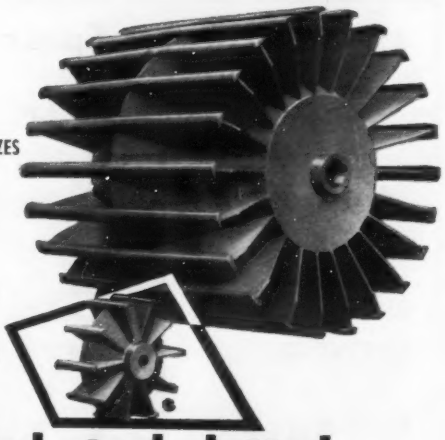
Perma pads are made three times heavier in collar area than conventional pads. A steel retainer spring holds pad permanently on spindle—instead of ordinary crimping method. They swing free thru a 60° arc. Wilton C Clamps have a 23% increase in spindle strength using a shallower double lead Acme thread. Unconditionally guaranteed against breakage! Lower in price! Start saving money now. Specify WILTON!

WILTON
Wilton Tool Mfg. Co., Inc.
Schiller Park, Illinois

Write for *NEW* C Clamp Catalog 692

NED-2

▲ For more details circle NED-1017 B8 on enclosed inquiry slip ▲



STANDARD SIZES
12" to 42" DIAMETER
8" to 42" WIDTH

save belts with welded steel slatted pulleys

Jeffrey's self-cleaning cone design prevents build-up of gritty or sticky materials that damage and misalign conveyor belts. Wide crossbars give good traction, rounded edges prevent gouging. *Money-saving Jeffrey Slatted Pulleys outlast, outperform solid-face type!* Write Merchandise Sales Division.

JEFFREY

THE JEFFREY MANUFACTURING COMPANY, COLUMBUS 16, OHIO

▲ For more details circle NED-1018 B8 on enclosed inquiry slip ▲

NEW DRY CHEMICAL EXTINGUISHER ...FASTEST WAY TO KILL FIRE!

Here from Kidde is the newest, the fastest, the easiest-to-operate pressurized dry chemical fire extinguisher. Exciting new features include: extra-large aluminum handle (operates with gloves on); center-balanced (easier to carry); recessed pressure gauge (tells if a unit is charged, ready for use); simplified operation and instructions . . . "Remove Horn" (automatically releases trigger safety lock), "Pull Trigger" (instantly dry chemical whooshes out, kills fire). Comes in 20 and 30 pound capacities. UL-approved. Requires only 225-250 psi charging pressure. Write Kidde today for name of nearest distributor.

Kidde

Walter Kidde & Company, Inc.
224 Main St., Belleville 9, N. J.
Walter Kidde & Company of Canada Ltd., Montreal — Toronto

▲ For more details circle NED-1019 B8 on enclosed inquiry slip ▲

Check the reasons why

Spaulding MATERIALS HANDLING PRODUCTS can improve your storage and handling systems

Send For **FREE** Catalog

SMOOTHNESS hard wear won't chip or splinter them.
TOUGHNESS to withstand impact and abrasion.
DURABILITY for long lasting resistance to oils, greases, rust and corrosion.

Spaulding Materials Handling
Products are made in all standard types and sizes or custom-made to your particular needs.

SPAULDING FIBRE COMPANY, INC.
DOVER, N. H.

Please send me your free catalog of Spaulding Vulcanized Fibre materials handling products.

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

▲ For more details circle NED-1020 B8 on enclosed inquiry slip ▲

Your Room Space is CEILING HIGH when you use

Adjusto-Deck

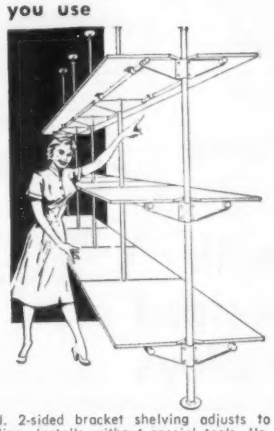
BRACKET SHELVING

•

Revolutionary New & Better

Will carry tremendous loads

•



Expands storage space upward. 2-sided bracket shelving adjusts to any depth or width, clear to ceiling. Installs without special tools. Uprights take rugged hold of ceiling & floor without bolting or threading of pipe. Costs 30% less than steel shelving. Saves on freight rates. Standard pipe & plywood may be bought locally to suit needs. Depths 26" to 96". Widths 48" to 96".

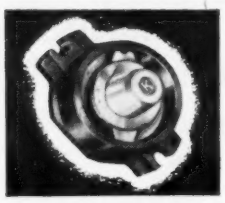
Without shelving, ADJUSTO-DECK also makes perfect Hanging Racks.

Write Today for Full Information

WALTER HAERTEL CO.

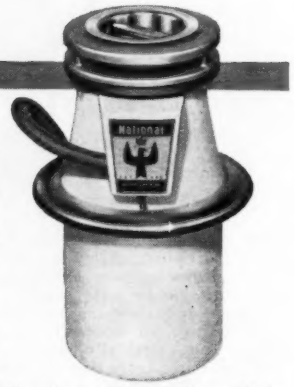
2848 FOURTH AVENUE, SOUTH
MINNEAPOLIS 8, MINN.

For more details circle NED-1022 B8 on enclosed inquiry slip



"With KLIXON Motor Protectors

We know we have complete protection!"



That's John P. Greene, Chief Disposer Engineer for National Rubber Machinery Company of Akron, Ohio, talking. His feelings are based on the long-time use of built-in Klixon Protectors in National Disposer's Citation Food Waste Disposer.

He goes on to say:

"Garbage disposers are very frequently subjected to heavy overload conditions and adequate motor protection is essential . . . we have never considered anything but Klixon Motor Protectors. We insist that all our motors be equipped with these foolproof devices."

You, too, can keep motors in your equipment or products working dependably by specifying and using Klixon Protectors. They will reduce maintenance costs, service calls, and repairs and replacements.

METALS & CONTROLS CORPORATION

Spencer Thermostat Division 3302 Forest Street, Attleboro, Mass.

KLIXON

For more details circle NED-1023 B8 on enclosed inquiry slip

Wise Selections!

New Designs—from a Famous Old Line!

DAVID ROUND
(Since 1869)
HOISTING EQUIPMENT

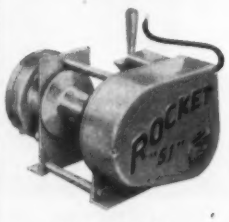
Choose a David Round Model 55 Electric Hoist or a DR Electric Winch not only for up-to-date design—modern engineering, but also for rugged dependability—traditional in David Round equipment since 1869.

DR MODEL 55 Cable Type ELECTRIC HOISTS

Compact—close-headroom. Permanently lubricated. Solenoid and mechanical brakes. Various speeds. 24 volts at push button. Capacities ¼ to 2 tons incl.

DR ELECTRIC WINCHES

Capacities 500 to 10,000 pounds. Ball Bearing equipped—rugged steel construction. Automatic Friction Load Brake. Speeds and currents to fit varying requirements.



DR Rocket 51 ELECTRIC WINCH

Order from your dealer • Write for Catalog Data

David Round and Son, Inc.

P. O. BOX 883, CLEVELAND 22, OHIO

For more details circle NED-1024 B8 on enclosed inquiry slip

New Literature & Catalogs

Material Handling Equipment

Lanham Co.—Catalog LS-58 deals with the economies and applications of the Rollaway semilive skid system to speed industrial material handling. Guidance is afforded to determine the proper skid or unit for a given need. Also covered are skids, boxes, and sectional bins.

For more details circle NED-1025 B8 on enclosed inquiry slip

Blast Cleaning & Finishing, & Dust Collecting Units

Wheelabrator Corp.—32-page Catalog 951-D deals with complete line of airless blast cleaning machines as well as wet blast, air blast, and dust control equipment. Also covered are cast sheet shot and grit abrasives, sandcutters, and core rod straighteners.

For more details circle NED-1026 B8 on enclosed inquiry slip

Mixing, Blending, & Process Equipment

H. W. North Co.—Described in Bulletin PE-5802 is special purpose machinery for the chemical and process industries. This condensed guide contains means for obtaining more detailed data on the mixing, blending, and process equipment covered.

For more details circle NED-1027 B8 on enclosed inquiry slip

Atomic Instruments

Baird-Atomic, Inc.—Scalers, amplifiers, high voltage power supplies, integral and differential analyzers, rate meters, radiation detectors, timers, radiation shields, and sample holders are but a few of the products for atomic instrumentation described in Catalog A-1. Informative physics section contains useful reference data, curves, and equations commonly associated with atomic instruments and products.

For more details circle NED-1028 B8 on enclosed inquiry slip

Way Protectors

A&A Mfg. Co.—Affording protection to ways of machine tools and other way-equipped machines, Gortite-Way protectors are available in sizes that open up to 90 feet on both sides of a tool column. Standard and special way protectors for any need are detailed in Bulletin GW-100.

For more details circle NED-1029 B8 on enclosed inquiry slip

Abrasive Belt Grinding

Engelburg Huller Co.—"How Abrasive Belt Grinding Increases Production at Lower Cost" is a 24-page guide to abrasive belt equipment and finishing techniques. Case histories deal with over 30 actual studies of abrasive belt machining applications. Various models of abrasive belt finishing machines are described.

For more details circle NED-1030 B8 on enclosed inquiry slip

Brass Valves & Fittings

Superior Valve & Fittings Co.—Recent technical data on ASME-approved relief valves, hermetically fused sight glasses and high capacity heat exchangers are incorporated in 20-page Catalog R-6 on refrigeration and air conditioning brass valves, accessories, and fittings. Catalog gives size and application data for a complete line.

For more details circle NED-1031 B8 on enclosed inquiry slip

Hydraulic Surface Grinders

Hill Acme Co.—Horizontal spindle, vertical spindle, and extra heavy duty double housing models of Hill's hydraulic surface grinders are described and illustrated in 30-page brochure. Tables of these grinders range from 8 to 40 ft long. Precision way grinders are covered as well.

For more details circle NED-1032 B8 on enclosed inquiry slip

Punch Press Accessories

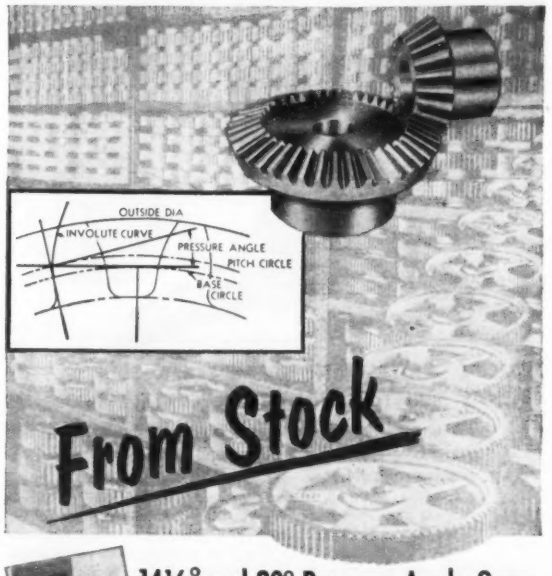
Jaco Devices, Inc.—Developments featured in 6-page folder on punch press accessories include a new heavy base on the stock reel which increases its capacity; a semisteel bridge and quick-release button on the stock feed; a heavy-duty scrap chopper; and a new Jaco roll feed line. Chopper cuts ⅛-in. thick medium steel.

For more details circle NED-1033 B8 on enclosed inquiry slip

Weed & Brush Control

Monsanto Chemical Co.—24-page Booklet 2-625 on herbicides points out that various formulations of 2,4-D and 2,4,5-T make possible year-round programs of foliage, weed and brush control at substantial long-term savings. Booklet features a chart which lists more than 50 common woody plants controllable with these chemical combinations.

For more details circle NED-1034 B8 on enclosed inquiry slip



14½° and 20° Pressure Angle Gears

All Ohio Stock Gears have a generated tooth form for stronger, quiet, and smoother running performance. AVAILABLE IN 14½ DEGREE OR 20 DEGREE PRESSURE ANGLE. Spur gears, 3 to 64 Pitch; worm gears, 3 to 32 Pitch; bevel gears, 3 to 16 Pitch; miter gears, 4 to 32 Pitch; helical gears, 6 to 24 Pitch.

SEND FOR OHIO GEAR'S NEW HANDBOOK containing 186 pages of valuable charts, tables and formula to help you select the right drive.

ESTABLISHED 1915

THE OHIO GEAR COMPANY

1320 East 179 Street Cleveland 10, Ohio

For more details circle NED-1035 B8 on enclosed inquiry slip

FOR AIR-DUST OR FUME CONTROL...

Get this FREE catalog

WRITE TODAY FOR CATALOG #70
SHOWING NEW INDUSTRIAL APPLICATIONS

FLEXAUST hose and PORTOVENT retractable ducts are made of strong durable neoprene coated nylon or cotton fabrics, wire reinforced for suction or pressure uses. Sizes 1¼" to 36" i.d.

INSTALLED IN MINUTES . . .
IN SERVICE FOR YEARS

THE FLEXAUST COMPANY

DEPT. NED-2 100 PARK AVE., NEW YORK 17, N. Y.

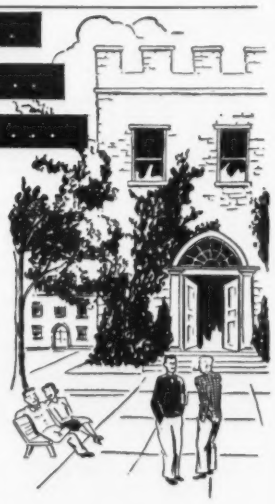
DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-1036 B8 on enclosed inquiry slip

at the university level . . .

at the high school level . . .

at the grade school level . . .



THOUSANDS OF ADMINISTRATORS SELECT TELKEE SYSTEMS . . .

Because Telkee handles the complex situation in schools which must have positive key control.

How Telkee Works: Keys are indexed three ways: by description of item locked, by hook number, by lock number. Cross Index, then, shows where every key is. No more lost keys, less duplicate key expense, guaranteed key control. With Cross Index hidden, keys have maximum security even if cabinet is forced open.

Free Booklet Available: Obtain complete facts on Telkee Systems today without obligation.

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TEL KEE *The* **MOORE KEY CONTROL®** *Systems*

P. O. MOORE, INC.

A SUBSIDIARY OF SUNROC CORPORATION, GLEN RIDDLE, PA.

For more details circle NED-1021 B8 on enclosed inquiry slip

ARMSTRONG

SET-UP and HOLD-DOWN TOOLS

ARMSTRONG Set-up and Hold-down Tools reduce setting-up time—keep men and machines producing. Designed for use on planers, drill presses, milling machines, etc., they hold work securely and rigidly, and thereby reduce spoilage and prevent costly accidents.

Your local Armstrong Distributor carries ARMSTRONG Set-up and Hold-down tools in stock in sizes for every operation. Stop haphazard setting-up methods. Provide each of your machines with a full complement of ARMSTRONG Set-up and Hold-down Tools.

Write for circular

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVE. • CHICAGO 30, U.S.A.

For more details circle NED-1037 B8 on enclosed inquiry slip

EASTERN CENTRIFUGAL JOB-RATED PUMPS

Original equipment manufacturers have chosen the Eastern D-11 Centrifugal Pump for 24,897 successful installations. With eighteen pounds of compact design (9¾" x 4⅝"), this close-coupled, single-stage centrifugal pump with induction type motor provides an ideal job rating for many installations.

The D-11 and other Eastern Centrifugal Pumps are available in 18-8 Type 303 and Type 316 Stainless Steel, Monel, Hastelloy "C", Cast Iron and Bronze. They range from 1/4th to ¾ H.P. with capacities up to 70 G.P.M., pressures to 65 P.S.I.

SEND FOR BULLETIN 1204R

Eastern INDUSTRIES, INC.
100 SKIFF ST., HAMDEN, 14, CONN.

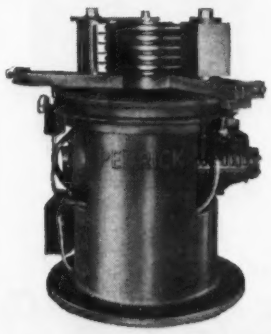
For more details circle NED-1038 B8 on enclosed inquiry slip

extra!

ALL ABOUT THE LATEST BENDING METHODS

Let Pedrick show you how the latest methods of bending pipe, tube and structural metal—on a job or production basis—can save you money.

For full information on Pedrick Production Benders, write PEDRICK TOOL AND MACHINE CO 3640 N. Lawrence St., Phila. 40, Pa. Dept. 6.

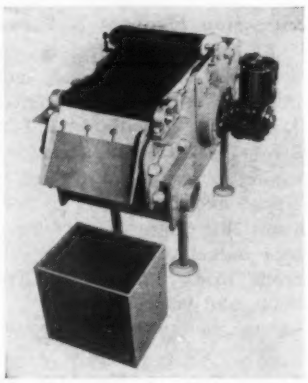


FREE "PEDRICK LINE" BULLETIN, WRITE TODAY

PEDRICK production benders

For more details circle NED-1039 B8 on enclosed inquiry slip

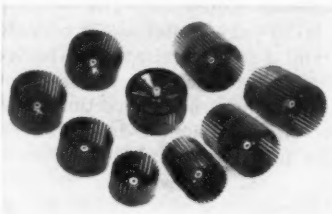
MAGNETIC SEPARATORS for coolants and cutting oils



Useful life of coolants and cutting oils can be extended by cleaning them in these magnetic separators, offered in two models for use in grinding, honing, lapping, thread grinding, and other ferrous metal-working operations. Both metallic and nonmetallic solids are removed by a combination of magnetic and mechanical separation. Adjustable rotation of a magnetic drum forms a magnetized brush which provides a filtering action. One model uses a scraper blade to remove solids from the magnetic drum, and the other has a conveyor system to remove and dispose of the solids. In both designs, the swarf passes through a squeeze roller to remove trapped liquid. Capacities range up to 150 gpm. Made by **Infilco Inc.**, Box 5033, Tucson, Ariz.

For more details circle NED-1040 B8 on enclosed inquiry slip

MOLDED PLASTIC BLOWER WHEELS are quiet and corrosionproof



One-piece, molded plastic blower wheels, either in single inlet or double inlet types, are now offered in 5⅜, 6⅜, 7⅜, and 8-in. diameters. Wheels are aerodynamically designed and can withstand elevated temperatures. They are quiet in operation, corrosionproof, and light in weight. Blade lengths to fit any application are available, and hubs can be located either inside or outside the wheel. Standard stock bores are ½, ⅜, and 5/16 in. Made by **Denbo Engineering & Sales Co.**, Dept. LST, 3301 Martindale Ave., Indianapolis 18, Ind.

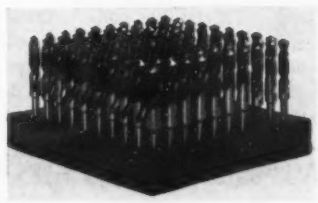
For more details circle NED-1041 B8 on enclosed inquiry slip

MARKING CRAYONS in 13 colors for all materials

Sheet metal, pipe, fittings, ductwork, plastics, ceramics, rubber, and laminates are typical of the materials that can be marked permanently for identification or instruction purposes with this Markal B Paintstik. Marks are made readily on all cold surfaces whether wet, dry, or oily. For coding purposes, 13 colors are available. Marks are weather and fadeproof. They are unaffected by rust. Diameters of 11/16 and ⅜ in. are offered by **Markal Co.**, Dept. NED, 3052 W. Carroll Ave., Chicago 12, Ill.

For more details circle NED-1042 B8 on enclosed inquiry slip

TWIST DRILLS in 0.015 to 1.000-in. sizes



Twist drills are now being offered in sizes from 0.015 to 1.000 in. in increments of 0.001 in. Sizes above 0.500 in. are made in the S & D ½-in. shank style. Below the ½-in. diameter, drills are made in regular jobber proportions. Tolerances on outside diameter are held to 0.0005 in. Drill blanks in the same 0.001-in. steps are also made. Drill and blank sets in a variety of combinations are available. Made by **Hayden Twist Drill Co.**, Box 437, Manila, Ark.

For more details circle NED-1043 B8 on enclosed inquiry slip

Controlling Dust in Industry

W. W. Sly Mfg. Co.—"Industrial Dust Control," a 36-page, profusely illustrated catalog, describes in detail the Sly line of dust filters and gives information on how to engineer dust control systems. Operating principles of Roll-Clean Dynaclone dust filter and continuous dust filters are explained. Engineering section with many drawings outlines a step-by-step development procedure.

For more details circle NED-1044 B8 on enclosed inquiry slip

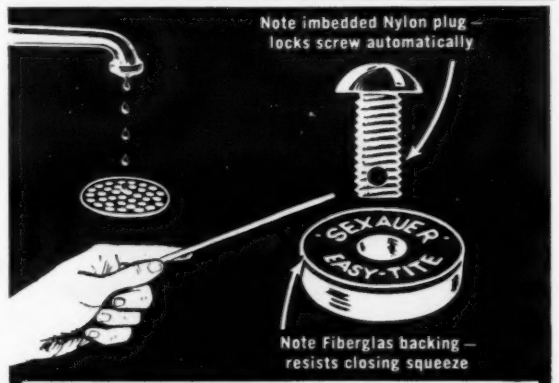
BUYING ALUMINUM TUBE AND SHAPES?

SEND FOR

MADE IN U.S.A. TO THE STANDARDS OF AMERICAN INDUSTRY

WOLVERINE TUBE
DIVISION OF CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

For more details circle NED-1045 B8 on enclosed inquiry slip



NEW WAY TO

Prevent Faucet Leaks!

★ **9 out of 10 washers are fastened with screws that are TOO LONG or SHORT. The screws quickly loosen; the loosened washers are destroyed thru grind and squeeze of opening and closing faucets.**

34 years of research uncovers new solution

★ **Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, with an imbedded expanding NYLON PLUG, lock at the required depth AUTOMATICALLY, hold washers FIRMLY! Made of rustproof, non-corroding Monel, heads don't twist off, screw slots don't distort. They are easily removed when necessary, can be re-used repeatedly.**

★ **Used with NEW 'Sexauer' EASY-TITE faucet washers, they make a combination that outlasts past faucet repairs "6-to-1"! EASY-TITES are made of super-tough, pliable du Pont compound (neither rubber nor fibre) and reinforced, like a tire, with a vulcanized layer of Fiberglas. They resist distortion and splitting from shut-off grind and squeeze.**

Hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, stopping just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS, LABOR and costly FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc., Dept. AU-28
2503-05 Third Ave., New York 51, N. Y.

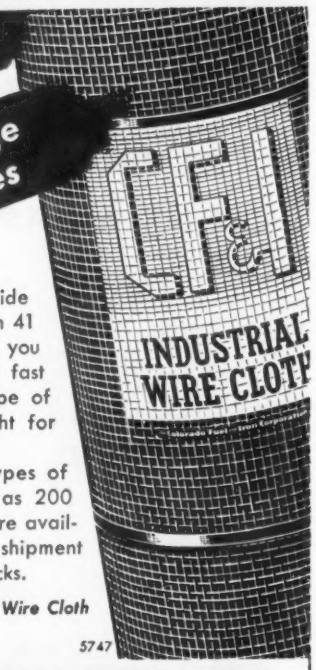
Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

My Name _____ Title _____
Company or Institution _____
City _____ Zone _____ State _____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-1046 B8 on enclosed inquiry slip

quick service
wide range of meshes



CF&I's nationwide sales force, located in 41 key cities, can give you accurate advice and fast quotations on the type of wire cloth that's right for your job.

Many standard types of wire cloth — as fine as 200 mesh in all metals—are available for immediate shipment from CF&I's large stocks.

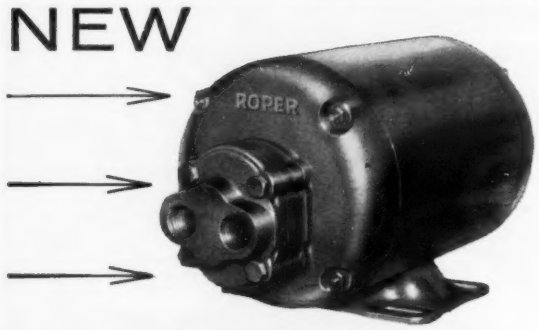
Write for Industrial Wire Cloth Catalog

5747

CF&I INDUSTRIAL WIRE CLOTH
THE COLORADO FUEL AND IRON CORPORATION
Denver • Oakland • New York
Sales Offices in all Key Cities

For more details circle NED-1047 B8 on enclosed inquiry slip

NEW



ROPER
T-SERIES PUMP UNIT
Compact, Integral Construction
.6 to 6.8 GPM — Pressures to 400 PSI
for Hydraulic, Pressure Feed, or Transfer Work

Space-savers for those stationary or mobile units where dependable pumping is a must. That's the new T Series by Roper . . . the compact pump unit that is approximately the same size as a standard motor of the HP required for driving. The pump serves as the end bell of the motor . . . design eliminates a coupling, thus conserving valuable space.

Send for Bulletin 31 Today

662 BLACKHAWK PARK AVENUE
ROCKFORD, ILLINOIS

ROPER HYDRAULICS, INC.

For more details circle NED-1048 B8 on enclosed inquiry slip

FASTER FEEDS WITH... SUPERBORE

THE COUNTERBORES WITH
Available from stock for each screw size
30° Right Hand Spiral, 4 Flute

Standard
1/64" Oversize
1/32" Oversize

Now you can speed up production 100% with our *New* 30° fast right hand spiral, four-flute counterbores. You will find that faster feeds are possible with this freer-cutting tool. Hardened counterbore blanks in stock can be ground to any special pilot and flute diameters in one week.
Few territories open for manufacturer's representatives.

Free COMPLETE REAMER CATALOGUE
with world's Greatest Reamer selection by the Thousands' and thousandths. Write for it today!

TWENTIETH CENTURY MANUFACTURING CO.
ROUTE 176 and BRADLEY ROAD
BOX 429NE LIBERTYVILLE, ILL.

For more details circle NED-1049 B8 on enclosed inquiry slip

New Literature & Catalogs

Induction Heaters & Furnaces

Allis-Chalmers Mfg. Co.—Design and performance details of high frequency induction heaters and melting furnaces are presented in 12-page Bulletin 12B6430B. Available in outputs from 10 to 100 kw, self-contained induction heaters are usable for rapid soldering, annealing, melting, brazing, hardening, and forging operations. For applications beyond the range of vacuum tube types, motor-generator induction heaters are offered with output ratings from 15 to 1250 kw at frequency ratings of 960, 3000, and 9600 cycles.

For more details circle NED-1050 B8 on enclosed inquiry slip

Spray Guns & Finishing Booths

Paasche Airbrush Co.—Line of air finishing booths and equipment and a complete line of automatic spray guns are covered respectively in 24-page Catalog 4 and 14-page Catalog 3. Former provides dimensional data on booths with up to four water curtain sides, sludge collecting types, automotive finishing booths, and dry floor and bench type booths. Catalog 3 specifies spray guns, atomizing assemblies, air caps and tips, and accessories.

For more details circle NED-1051 B8 on enclosed inquiry slip

Chemical Coolers & Flakers

Blaw-Knox Co., Buflovak Equipment Div.—Buflovak flakers described in 18-page Bulletin 370 operate continuously to cool and flake chemicals. Capacity varies from 10 to 200 lb per hour per square foot of drum surface. Bulletin discusses protection from dust and toxic hazards, twin and double drum flakers, Roto-Shelf coolers, and pilot plant flakers and cooling drums.

For more details circle NED-1052 B8 on enclosed inquiry slip

Power Transmission & Conveying

Chain Belt Co.—"Mechanical Power Transmission and Conveying Machinery" is title of Catalog 610 describing and specifying Chain Belt products for power transmission, conveying and elevating service. Basic data simplify general selection of chain for common applications. Cast and cut-tooth sprockets, bearings and take-ups, transmission components, elevator buckets, and belt conveyor products are also listed.

For more details circle NED-1053 B8 on enclosed inquiry slip

Die Sets & Accessories

Standard Die Set Co.—Detailed specifications, engineering drawings, cross-sectional views, and photographs of an extensive line of die sets and accessories are found in 63-page, spiral-bound Catalog 570. A variety of two and four-post models and sizes is offered. The thumb-indexed catalog includes prices.

For more details circle NED-1054 B8 on enclosed inquiry slip

Bucket Elevator Systems

Prab Conveyors, Inc.—Illustrated Brochure P-40 gives details of a complete line of bucket elevators for handling dusty, abrasive materials. Drawings and application pictures amplify the text.

For more details circle NED-1055 B8 on enclosed inquiry slip

Ultrasonic Cleaners

Narda Ultrasonics Corp.—Thirty-five soils common to metal, glass, plastic, ceramic, rubber, paper, and other products; parts; and assemblies can be removed by the Series 600 SonBlaster ultrasonic cleaner described in 2-page Data Sheet 600. Optional cleaning tank types are covered.

For more details circle NED-1056 B8 on enclosed inquiry slip

Steel Strapping Under Power

Stanley Works, Stanley Steel Strapping Div.—Diversified applications for several powered steel strapping tools in a number of industries are described and illustrated in 12-page brochure "Power Strapplications." Powered hand tools, and stationary and portable machines are detailed.

For more details circle NED-1057 B8 on enclosed inquiry slip

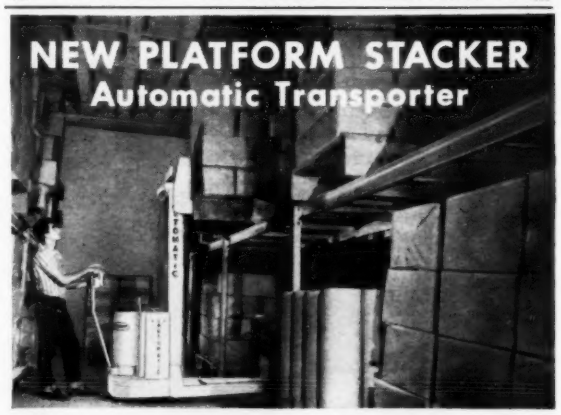
Rotary Cutting Tools

Precise Products Corp.—48-page illustrated manual describes types of rotary cutting tools of materials ranging from high speed steel to carbides, abrasives, and diamonds. It is designed to aid tool users in selecting the correct tool for the job. Tools are indexed by types, size, and machine application.

For more details circle NED-1058 B8 on enclosed inquiry slip

For more details circle NED-1059 B8 on enclosed inquiry slip

NEW PLATFORM STACKER
Automatic Transporter



Models WL and WLT are entirely new in every detail, and have many important advances, including:
- Reinforced platform and nesting uprights.
- Extra-compact, "W" line powerhead, only 28⅝" long, depending on battery size.
- Free lift available.
- Three-speed butterfly travel control.
- Available with 6½" to 11" (lowered) platform heights.
- Steel, rubber or Polyurethane load wheels.
- CAPACITIES: 4000 lbs. with telescopic mast...6000 lbs., non-telescopic only.

Lower in both first cost and operating costs than either gas or electric-powered high-lift rider-type stackers, yet performs the same functions. Convenient lease and purchase plans...write today for full details.

Automatic Electric Industrial Trucks
Cost Less to Own...Less to Operate
AUTOMATIC TRANSPORTATION COMPANY
Division of The Yale & Towne Manufacturing Company
61 West 87th Street—Dept. B8—Chicago 20, Illinois

Electric Automatic Industrial Trucks

WORLD'S LARGEST EXCLUSIVE BUILDERS OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

For more details circle NED-1060 B8 on enclosed inquiry slip

PROTECTED
GORTITE
SLEEVES
BOOTS

Ask for new bulletin AH-3

A&A Mfg. Company Inc.
712 S. 12th St.
Milwaukee 4, Wis.

ALL SHAPES AND CONTOURS

For more details circle NED-1061 B8 on enclosed inquiry slip

THE COMPACT

Small-Light Weight —Durable with a Variety of circuits

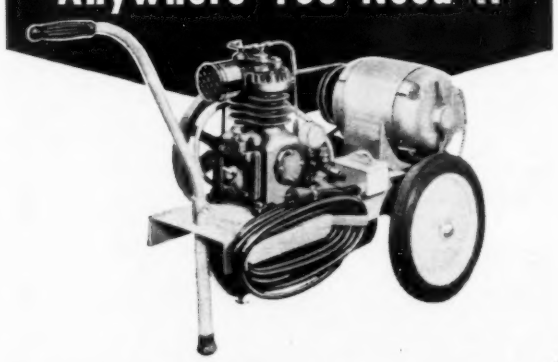
Don't hold up production schedules for special-project designing. We have what you need—right now. More than 75 different models in stock. See for yourself.

SEND FOR COMPLETE CATALOG TODAY!

LINEMASTER SWITCH CORP.
424 Woodstock Terrace, Woodstock, Connecticut

For more details circle NED-1062 B8 on enclosed inquiry slip

Have Compressed Air Anywhere You Need It



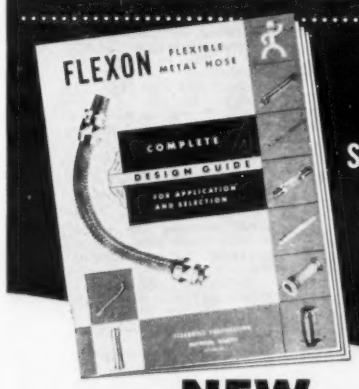
New DeVilbiss Portable Air Compressors bring air to the job for spray painting, air tools, emergency service, or on-the-spot air supply. Available in ½ or 1 hp class, gas and electric models. Delivered pressure 60 or 100 pounds. Can even be carried in the trunk of your car. Write today for full details.

DEVILBISS

THE DEVILBISS COMPANY
Toledo, Ohio

For more details circle NED-1063 B8 on enclosed inquiry slip

NOW available for the first time...



DETAILED SELECTION AND APPLICATION DATA FOR METAL HOSE

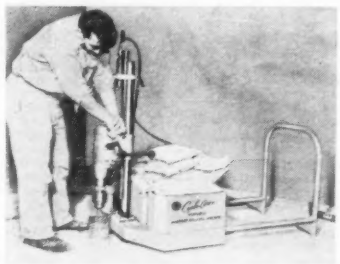
THE NEW FLEXON METAL HOSE DESIGN GUIDE

Here is the booklet that takes the mystery out of metal hose. It gives you—fundamentals of metal hose . . . how to select metal hose . . . installation guides . . . typical examples of applications . . . corrosion data . . . fitting data . . . plus complete Flexon hose specifications. All in a handy 36-page booklet. Ask for your copy today.

Flexonics Corporation
1343 S. THIRD AVENUE • MAYWOOD, ILLINOIS
In Canada:
Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-1064 B8 on enclosed inquiry slip

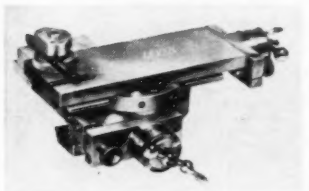
MASONRY DRILLING RIG cuts 6-in. holes in walls or floor



Manually or hydraulically operated, this masonry drilling machine drives Cyclo-core carbide-tipped masonry bits to drill up to 6-in. diameter holes in solid or reinforced concrete. Machine develops up to 1000 lb or more pressure on the cutting edges of the bit. No water is required. In actual tests, a 2-in. hole was drilled in solid concrete at a rate of 3.65 in. per minute. Made by **New England Carbide Tool Co.**, 55V Commercial St., Medford 55, Mass.

For more details circle NED-1065 B8 on enclosed inquiry slip

PRECISION SLIDE REST for jewelers type instrument lathe



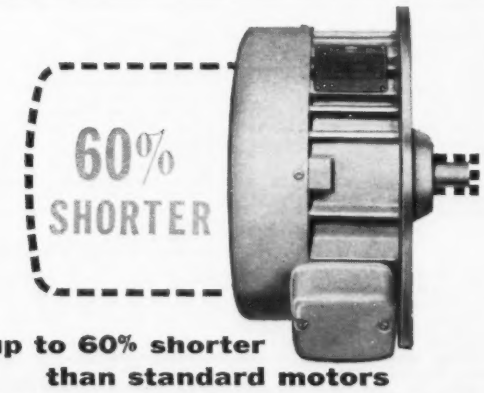
Usable on all standard jewelers type instrument lathes, this compound slide rest adapts machine for various complex machining operations. The 1-in. diameter lead screw dials have nonglare finish for accurate setting. Swivel slide is locked with two T-bolts to hold under any load. Both slides have micrometer stops. This slide rest can be supplied with screw feeds or with lever feeds for one or both slides. Tool post cannot break tool when clamping it. Made by **Louis Levin & Son, Inc.**, Dept. ND, 3610 S. Broadway, Los Angeles 7, Calif.

For more details circle NED-1066 B8 on enclosed inquiry slip

LIGHTWEIGHT HEIGHT BLOCKS speed tooling and patternmaking

Easy handling of these lightweight magnesium and aluminum blocks effectively speeds up tooling and patternmaking operations. Units are available in 5, 10, 15, and 20-in. heights with tops 8 in. square. Magnesium blocks weigh from 13.5 to 19.5 lb; aluminum blocks, from 20.3 to 29.3 lb. Hand scraped faces are accurate to within 0.001 in. Serrated steel plates for top and bottom are also available precision ground to within 0.0005 in. Made by **Challenge Machinery Co.**, Dept. NED, 1943 Thomas St., Grand Haven, Mich.

For more details circle NED-1067 B8 on enclosed inquiry slip



up to 60% shorter than standard motors

NEW Louis Allis Pancake Motor

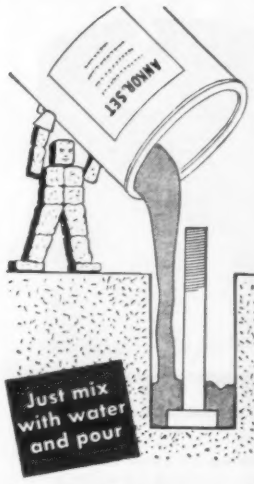
The new Louis Allis Pancake Motor is up to 60% shorter than other motors of its type. Actually, it's a conventionally-built—and consequently trouble-free—radial air-gap motor that's been compressed to less than half the length of many flange-mounted motors. The Pancake Motor couples space-saving design with top quality . . . maintains NEMA service factor.

The Pancake is ideal for machine tools, roof ventilators — any application where space is critical. Features include a rigid cast iron frame, pre-lubricated oversize bearings, and an insulating varnish that provides the highest degree of moisture, acid, and alkali resistance. Sizes from 1 to 15 hp, open or enclosed. Write The Louis Allis Company, 436 East Stewart Street, Milwaukee 1, Wisconsin.

SM-103

LOUIS ALLIS

For more details circle NED-1068 B8 on enclosed inquiry slip



ANCHOR Machines, Motors, Rails, Partitions, Flanges, Seats, etc. IN CONCRETE PERMANENTLY

USE ROCK-TRED ANKOR SET

- Easy To Apply
- Sets in ½ Hour
- Non-Shrinking
- Self-Bonding
- Contains No Pitch, Asphalt or Resin

Also for fast-patching cracks and holes in concrete

Comes packaged ready to use. Simply add water and apply. Quickly forms an extremely hard durable bond that becomes an integral part of the floor. Blends with surrounding concrete. Send for details.

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois

For more details circle NED-1069 B8 on enclosed inquiry slip

IF IT'S WORTH MAKING

IT'S WORTH MARKING

WORTH: "That quality of a thing rendering it valuable or useful." Your product is a valuable commodity, worth a great deal to you and to your customers. Your product has demonstrated its usefulness by its sales. Its quality deserves that it be *permanently identified.*

WRITE FOR CATALOGUE

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

For more details circle NED-1070 B8 on enclosed inquiry slip

with NEW Schrader® Lockdown Foot Pedal Air Valve

You can give your operator effortless, positive four-way control with this newly-designed pedal valve. It's ideal for use with double acting air cylinders and other reversing applications. The rocker-type pedal locks open or closed until tripped to the opposite position.

Flow capacities range from 150 to 375 cubic feet per minute, at 100 psi inlet pressure. Port sizes range from ¼" to ¾". Write for free Schrader catalog.

A. SCHRADER'S SON
Division of SCOVILL
459 Vanderbilt Avenue, Brooklyn 38, N.Y.

For more details circle NED-1071 B8 on enclosed inquiry slip

NEVER A MISTAKE

WHEN IT'S MARKED!

Stop questions that arise as to type of material, grade, weight and testing strength. Qualify them permanently and uniformly with a Matthews' Marking Unit and steel marking dies designed specifically for you. Write or call today for a marking analysis of your products. Sample parts and drawings are helpful in determining the correct marking application.

JAS. H. MATTHEWS & CO.
3943 FORBES STREET, PITTSBURGH 13, PA.
OFFICES IN PRINCIPAL CITIES WRITE, CALL OR TWX PG 424

For more details circle NED-1072 B8 on enclosed inquiry slip

Handiest TOOL IN THE PLANT!

NEW BULLETIN
Gives all the facts.
Ask for Bulletin 903.

CLEMENTS
Cadillac® BLOWER-SUCTION CLEANERS

Portable — versatile — economical. Simplest, quickest way to clean motors, machinery and other equipment. Pays for itself in any plant. Ask your dealer for a demonstration.

4 BLOWER-SUCTION MODELS
...including powerful Model HP with 2-speed motor for double duty. Easy starting at low speeds prevents blowing of fuses. All models available with attachments for handling many special tasks.

HANDLES 101 CLEANING JOBS
Blows dust, grit, chips and filings from hard-to-reach places. Use it as a suction cleaner for all kinds of jobs, or even to salvage bits of rare metal. Other models for annealing, soldering, and for preheating for bending.

BLOWER DIVISION | CLEMENTS MFG. CO.
6627 S. Narragansett Ave., Chicago 38, Ill.

SINCE 1910 Specialists in Quality Cleaning Equipment

For more details circle NED-1073 B8 on enclosed inquiry slip

Let this New Catalog help you

Select the right GRAYMILLS Coolant Pump for Any Job

and you don't have to be an engineer or an atomic scientist to understand it

The new Graymills Catalog showing pumps and pumping units for coolants, for circulating, for agitating, is so easy to use, is so packed full of useful information, that you owe it to yourself to send for it right away. It tells how to select the right pump for any job, with any liquid, for any size machine tool. It even covers special applications of such materials and solutions as pumice, rouge, abrasive mixtures, lacquer, liquid printing inks, adhesives, etc.

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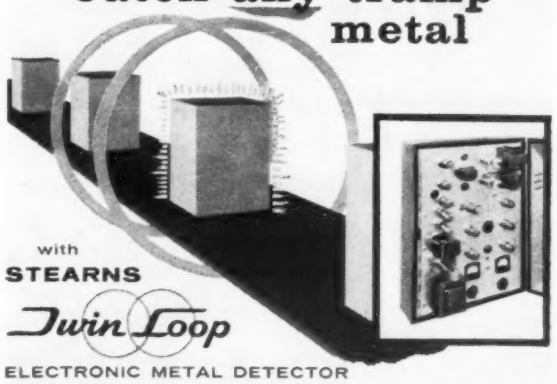

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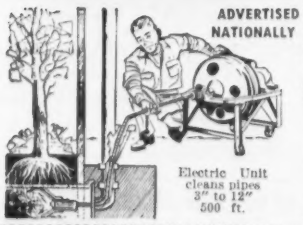

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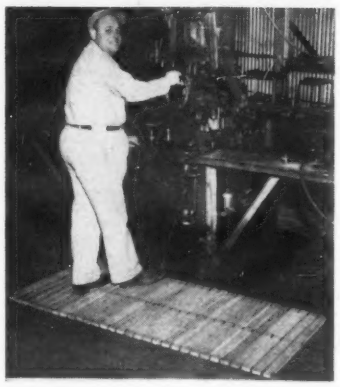

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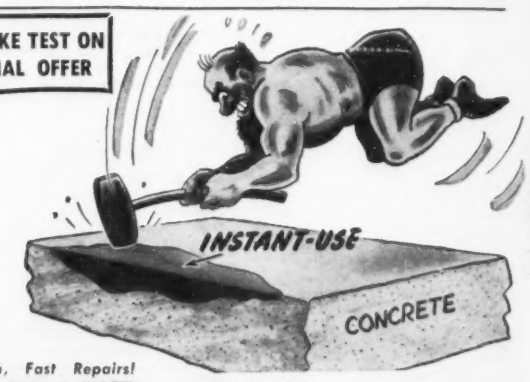

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